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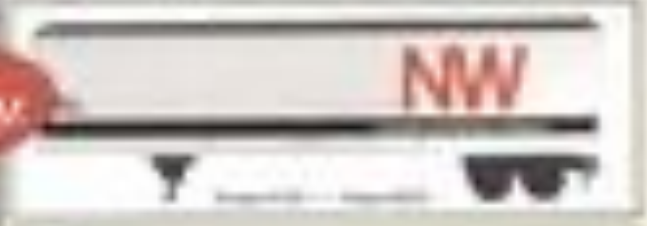


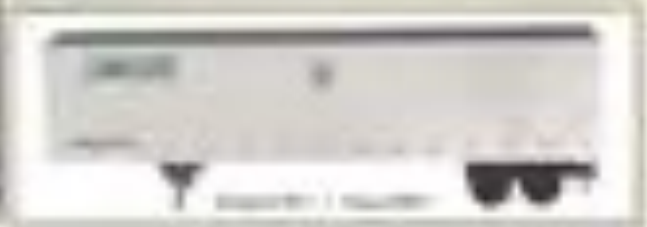

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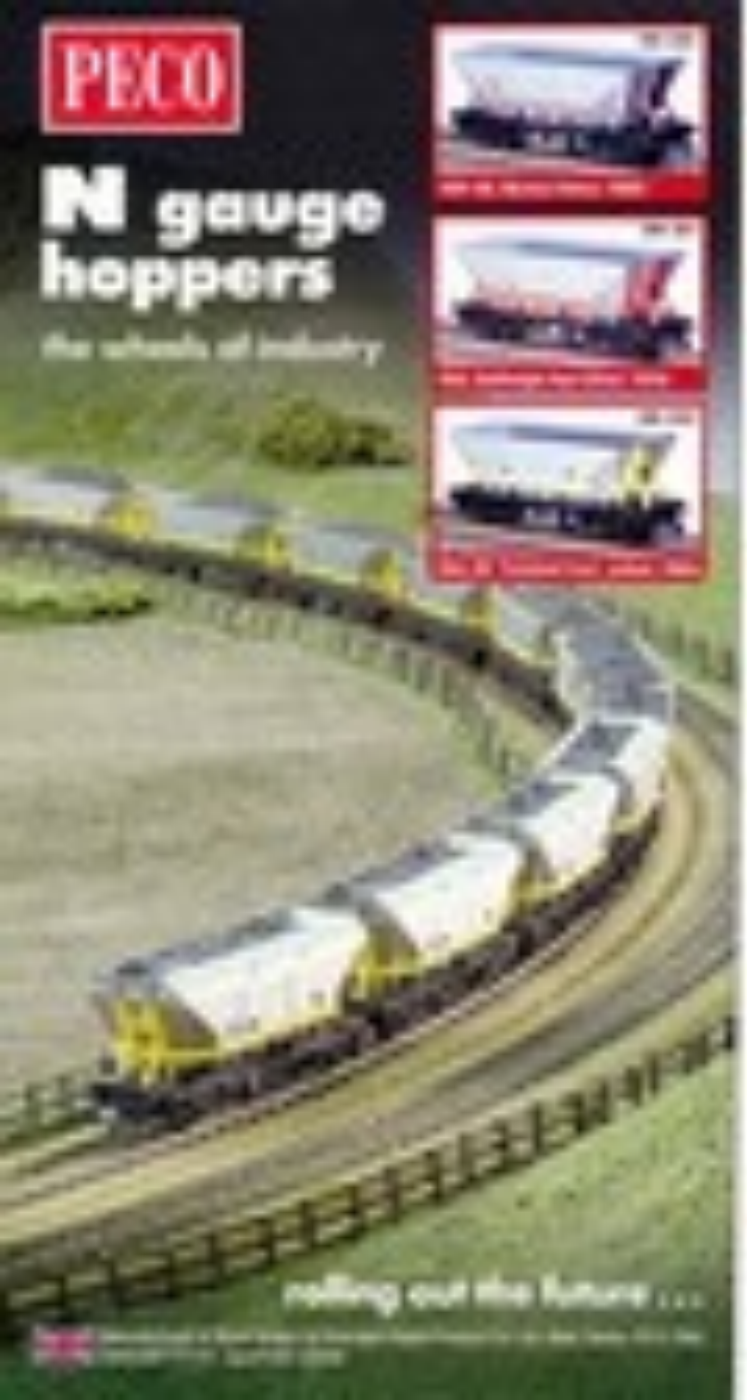

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## RAILWAY POST OFFICE

### RAILWAY PHOTOGRAPHY

Fred Frederick's book, "Railway Pioneer of the Western World" (pages 36-41, this month's issue), features Ken Pendleton of Hydrodynamic Research (HyR) as saying, "[Union Pacific] can go Down" on the title tracking the remaining 700 miles of single-track on the Sunset Route (only at 50 hours "of maximum service capacity"). However, as recent runs over Donner's continue that UP is already running more locomotive and not just this single main-tracked traffic that would be added to a capacity-selling schedule. Day-to-week, operations, what business would supply need as the Sunset UP re-single-tracked line for Amtrak crossing that suggested comment. Does UP really believe it has the power to give that down for 30 miles a week? If so, how is this being explained to customers?

In the absence of large commercial developments, many companies have passed out of existence that accounted their were too large to be responsive to rail. Historically I personally affect the very thing UP will solve its problems. I caution against accepting this as a foregone conclusion and respectfully suggest that time is of the essence.

Greg J. McCarron, Brentwood, Tn.

### RAILROAD RACKETS

The subcommittee that Phillips has done so a service by publishing last March's [sic] corrupt procedures ("Must to Rewrite Inter-Switching Decision," pages 44-47). Professor's Economic Rents are significant differences between the competitive or Fairer Returns and the United States and Canada.

Following "reconsideration" of the Rating Bottleneck decision of 1947, the Inter-mount secure railroad economic rents brought on by the government. Through many reorganizations and other changes, as the 1 1981 a "cut for the worst" compromise, favored Rail rate with ownership of rail railroad system to Regional Railroad and Rates, favored Rail cross 11,000 miles of track across Midwest, 1,000 customs, 9,000 grain coverage, 80,000 hoppers and tankers, and the signal systems that guides the movement of 15,000 trains every day. It is impossible for all maintenance and improvement or right-of-way, and is working capital invested as known rolling

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$17 Set 11: Chicago Railroads, Electric Railways and Motorcars
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$17 Set 13: Cars of the Chicago Transit Authority
$17 Set 14: Cars of the Chicago Transit Authority, Locomotives, Electric Cars, Electric Locomotives, Electric Railways and Motorcars
$17 Set 15: Chicago, Aurora and Elgin Railroad, Electric Railways and Motorcars
$17 Set 16: Chicago, South Shore and South Bend Railroad, Electric Railways and Motorcars
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CSX Rail News, Page 40

# NS crash raises safety concerns

FRA eyes regulation on untested systems like PTC (by the month)

The immediate reason of Norfolk Southern's January collision in Graniteville, South Carolina, that killed nine people, injured hundreds and forced the evacuation of the town's residents, is clear. But the long-term consequences could be far-reaching.

At 2:40 a.m. on that day, a 42-car NS freight was moving on "dark" territory (i.e., without trackside signals) over its normal route, a railbed in Graniteville, S.C., used mainly a few times a week, and entered a 30-mph curve at 47 mph. The train's locomotives and seven lead cars derailed, and seven of those cars, carrying hazardous chlorine and caustic soda, released a poisonous cloud of chlorine gas that forced 5,400 residents in a one-mile area to evacuate.

In the end, nine people died, including the train's engineer and conductor, Christopher Seeling and Jason Shaw. Hundreds of others, including 554 evacuated residents from the chlorine release, suffered respiratory problems. The train's conductor-in-training was also injured.

Investigators from the National Transportation Safety Board and elsewhere are hard-pressed to determine exactly what caused the derailment. Preliminary findings indicate that the train's engineer and conductor were properly certified and qualified for the run, and that it hadn't been operated with braking or control of the train's cars. No definitive cause of the crash had been announced by press time.

NTSB Chairman Ellen Engleman Conway-Welch spokesperson on the investigation team, Peter Knudson, said the team's initial findings indicate that the train's brakes were functioning properly before the derailment. The locomotive event recorders were also recovered undamaged, and the NTSB was examining the data they contained.

Knudson said the team was also looking into the train's speed, which was recorded by the event recorders. The train was traveling at 47 mph in a 30-mph curve, and the NTSB was trying to determine whether the train's engineer had applied the brakes before the derailment occurred.

Knudson said the team was also looking into the track's condition, and had found that the railroad had been conducting regular inspections of the track. The last inspection was conducted on January 5, 2005, and no defects were found.

Knudson said the team was also looking into the train's operating rules, and had found that the railroad had been conducting regular training for its employees. The last training session was conducted on January 10, 2005, and all employees were found to be in compliance with the railroad's rules.

Knudson said the team was also looking into the train's maintenance records, and had found that the railroad had been conducting regular maintenance on the train's cars. The last maintenance was conducted on January 15, 2005, and all cars were found to be in good condition.

Knudson said the team was also looking into the train's crew, and had found that the railroad had been conducting regular drug and alcohol testing of its employees. The last test was conducted on January 20, 2005, and all employees were found to be negative.

Knudson said the team was also looking into the train's dispatching, and had found that the railroad had been conducting regular training for its dispatchers. The last training session was conducted on January 25, 2005, and all dispatchers were found to be in compliance with the railroad's rules.

Knudson said the team was also looking into the train's signal system, and had found that the railroad had been conducting regular inspections of its signal system. The last inspection was conducted on January 30, 2005, and all signals were found to be working properly.

Knudson said the team was also looking into the train's track, and had found that the railroad had been conducting regular inspections of its track. The last inspection was conducted on February 5, 2005, and all track was found to be in good condition.

Knudson said the team was also looking into the train's bridges, and had found that the railroad had been conducting regular inspections of its bridges. The last inspection was conducted on February 10, 2005, and all bridges were found to be in good condition.

Knudson said the team was also looking into the train's tunnels, and had found that the railroad had been conducting regular inspections of its tunnels. The last inspection was conducted on February 15, 2005, and all tunnels were found to be in good condition.

Knudson said the team was also looking into the train's grade crossings, and had found that the railroad had been conducting regular inspections of its grade crossings. The last inspection was conducted on February 20, 2005, and all grade crossings were found to be in good condition.

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Knudson said the team was also looking into the train's track, and had found that the railroad had been conducting regular inspections of its track. The last inspection was conducted on March 1, 2005, and all track was found to be in good condition.

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Union Pacific trains use new track at sun to think repairing washouts and mudslides that severed Donner Pass in the Sierra Nevada on Jan. 4. Weather has forced Amtrak to cancel the Capitol Corridor and San Joaquins trains to go UP's Altamont Subdivision.

# Storms sock UP lines in California, Nevada

Crews scramble to resume service, but cost could top $100 million

Union Pacific was restoring California and Nevada track service to some of its most important and busiest routes after a series of storms battered the state's Sierra Nevada mountains and dumped record amounts of rain and snow on the railroad's lines.

The storms, which began in late December and continued into January, caused mudslides, washouts and downed trees and power lines that closed the railroad's Donner Pass route between Roseville, Calif., and Reno, Nev., for more than a week. Crews also had to repair damage to the railroad's Feather River Canyon route between Oroville and Hallelujah Junction, Calif., and its Martinez Subdivision between Oakland and Roseville, Calif.

Amtrak's Capitol Corridor and San Joaquins trains were forced to detour via UP's Altamont Subdivision between Oakland and Stockton, Calif., and Bakersfield, Calif., via Tehachapi, Calif., while BNSF Railway's Stockton–Barstow, Calif., line was used by Amtrak's Southwest Chief and Texas Eagle trains.

Amtrak's Coast Starlight train was detoured via UP's Coast Line between Los Angeles and the San Francisco Bay area, as well as via the Tehachapi, Calif., and Salt Lake City routes. Amtrak also ran some of the Capitol Corridor, Coast Starlight and San Joaquins trains between Oakland and Sacramento, Calif., via BNSF's Stockton Subdivision.

Amtrak's Zephyr and California Zephyr trains were detoured via UP's Overland Route between Oakland and Ogden, Utah, via Salt Lake City. Amtrak also ran some of the Capitol Corridor trains between Oakland and Roseville via BNSF's Stockton Subdivision and UP's Martinez Subdivision.

Amtrak's Coast Starlight train was detoured via UP's Coast Line between Los Angeles and Oakland, Calif., via Tehachapi and Bakersfield, Calif., and Amtrak's Capitol Corridor trains were detoured via UP's Coast Line between Oakland and San Jose, Calif.

UP's Coast Line from L.A. north to Guadalupe, Calif., fell victim to mudslides and washouts at three points between the coast and Santa Maria, Calif., on Jan. 9. The storms also damaged Amtrak's Coast Starlight Bridge L-8 over Alamitos Bay, Calif., on Jan. 8, and UP's Alhambra Subdivision east of L.A. Downtown on Jan. 9. Amtrak's Pacific Surfliner service between San Diego and San Luis Obispo, Calif., was suspended for several days.

Crews worked to restore service, but cost could top $100 million.

— David Lassig

# Freight-car builder breathes new life into Roanoke Shops

*Freight car America also plans to hold a public stock offering*

## Metra brings its two F40Cs out of storage

Under more new F7As first | page 30 Photographer Dan Lee at Metra's Halsted Yard facility from the parking lot in the Cubs. At left, No. 5 Metra and No. 11 (2010-2012 F-11) are at center in 2010, calling 12 at their cutting and waiting in 1992, as Metra set to overhaul the two F-type. F-11 and F-11 A, here are other problems identified some of the subsequent Motive/Force industries (MFDI) Pty.

# FRA orders reflectors on locomotives, cars

*Robert Johnson named the agency's acting administrator*

## TRAINS Timeline

## CSX leases W.Va. trackage to Watco

## Amtrak mulls cuts as revenue sags

### Curtain call for this Broad Way star

TRAINS

Don Phillips

## Railroading is still full of surprises

Consider the narrow-gauge railroad in east Africa that climbs from the Red Sea to a 7,000-foot summit over 70 spectacular miles

The story of why this east African railroad has come to be is interesting, but the story of why it was rebuilt after three decades of near total neglect is astonishing and heartening. There is literally no reason for it other than stubborn national pride, but any government official who is even vaguely aware of the railroad's existence will tell you it gets a different response each time. The top officials who made the decision in 1999 pointed others to talk to engineers or economists.

What's more, it has only one operating diesel but quite a few extremely usable steam locomotives, ranging from 0-4-0 compound tank engines built in Italy in the late 1930s

The railroad is its history, a small country that was an independency from neighboring Ethiopia more than a decade ago, after nearly 30 years of military and civil organization movement, the Ethiopian government in 1991 and allowed relatively liberal relations, and in Eritrea, to coincide. Despite ongoing border disputes and occasional deadly skirmishes over the past 14 years, Eritrea is now an independent country.

Italy had colonized Eritrea in the 1880s and built the railroad in the early 20th century to transport people and goods from the Red Sea port of Massawa to the capital city, Asmara. It took a long time to build the railroad through the rugged mountains, but the Italians did a very skilled job, following river valleys where possible but mostly charging up mountainsides. The stone bridges, made of cut stone, are beautiful in their own right.

The English crossed the Italians in 1941 during World War II, and the United Nations was left to determine what to do where Eritrea, its people, the decision was based on international politics rather than what the people in the country wanted. As in most the case, the United States was the chief sponsor of the effort to split the most restive of the Ethiopian people and give Eritrea to Ethiopia. After all, Ethiopia was on our side, and the United States didn't want weak, leftist Eritrea to fall under Soviet influence. That decision led to 30 years of war and many thousands of deaths.

The Ethiopians shut down the railroad in the 1970s, unable to provide security from Eritrean rebels. Rails and much was even stolen for building or concrete steps


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**Southern Pacific Daylight Locomotives, Robert J. Church**
The Daylights 4-8-4 steam locomotives of the SP, designed to many of SP's premier trains, are covered in detail, from construction to the builders, to many operations, history, and maintenance. 416 pages, 711 photos, 47 drawings. Price: $79

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Revolution.

# A stretch of the old Erie has another new operator: CNY

CNY leases central portion of its Southern Tier to a short line

On the last day of 1994, control of a 170-mile section of former Erie Railroad main line in New York and Pennsylvania shifted from Norfolk Southern to the Central New York Railroad, a subsidiary of Rochester, Ginna, Ontario & Western (ROA) based in the Syracuse, N.Y., area. CNY is regional New York, Susquehanna & Western (CSX) based for the Syracuse, New Jersey, and Binghamton, N.Y., for 20 years, and assumed responsibility for maintenance, crews and local service.

Reversing 100 years of through service on the portion of an Southern Tier line, which had been lightly used by previous owners Conrail, for the past months, the only through trains now operated by NYSW/R, which passed trackage rights to the end NS and will continue to do so.

NS President and Chief Executive Officer Robert C. Bell acknowledged that options via the Syracuse corridor will generate "less than 1,000 carloads annually to CNY. But the line is owned by NYSW/R's continued service, gives NS a more flexible transportation Syracuse, Binghamton and to Binghamton on its original line to New Jersey. NYSW/R runs three through trains each day during the week between Binghamton and Little Ferry, N.J. Big 6 says traffic is growing rapidly as both shortlines expect gains as New Jersey and customers have options traffic (over 100 are overhead trains).

Norfolk Southern Director of Business Planning William D. Ingram, Lyndon that NS wished to preserve the Southern Tier as a through route for the future, if possible. But, he said, "that day is not today," adding that light traffic density, tight curves and New York state taxes had led to massive operating losses (-$21 M) losses on through trackage rights on the line.

Now at Binghamton to Buffalo, NS operates a much-split freight over the Southern Tier, but use of Port Jervis, N.Y., a busy passenger center, with NY units to Hoboken, N.J., operated by NS Division (NS) to the marine Area Port Jervis to Hoboken, N.J., and Easton-Penn

Jersey Transit's Morris Branch, which runs to Hoboken. NYSW trains use the Morris Branch between Hackettstown and Hoboken, also over trackage rights to Metropolitan Transportation Authority (MTA) Metro-North Railroad between Hoboken and Croton-Harmon, N.Y.

Both and CNY have good working relationships on common customers and thus interesting new business. CNY has begun local service using a General Electric Locomotive & Manufacturing (GE) 44-tonner starting work improve loads in the spring.

The move is largely single-track main Conrail and Erie Railroad Bradley Locomotive, which is asking the Federal Railroad Administration for permission to abandon the signal system, a move Bell says will save about $400,000 a year. But CNY can speed up track inspection because the FRA requires a speed limit of 10 mph for track without signals.

The move also allows CNY to relocate 11 miles of second track between Nanticoke, N.Y., and Lanesboro, Pa., which will leave the Delaware River main a "shorter, more manageable track."

Bell has been involved in Conrail's identified and explored railroading for that decades, and he sees options in this project could help ensure economic success and improvement continues in past two decades. Bell both congressional agrees that of the new operator is not successful in the portion of the Erie CNY and NS could abandon filing an abandonment application.

— Mark H. Bunker

## Saying good-bye to WSOR's first lady

## Obituaries

### Robert M. Hanft, author and photographer

### John I. Bowman, Jr.: NRHS co-founder

### Paul A. Carleton, book publisher

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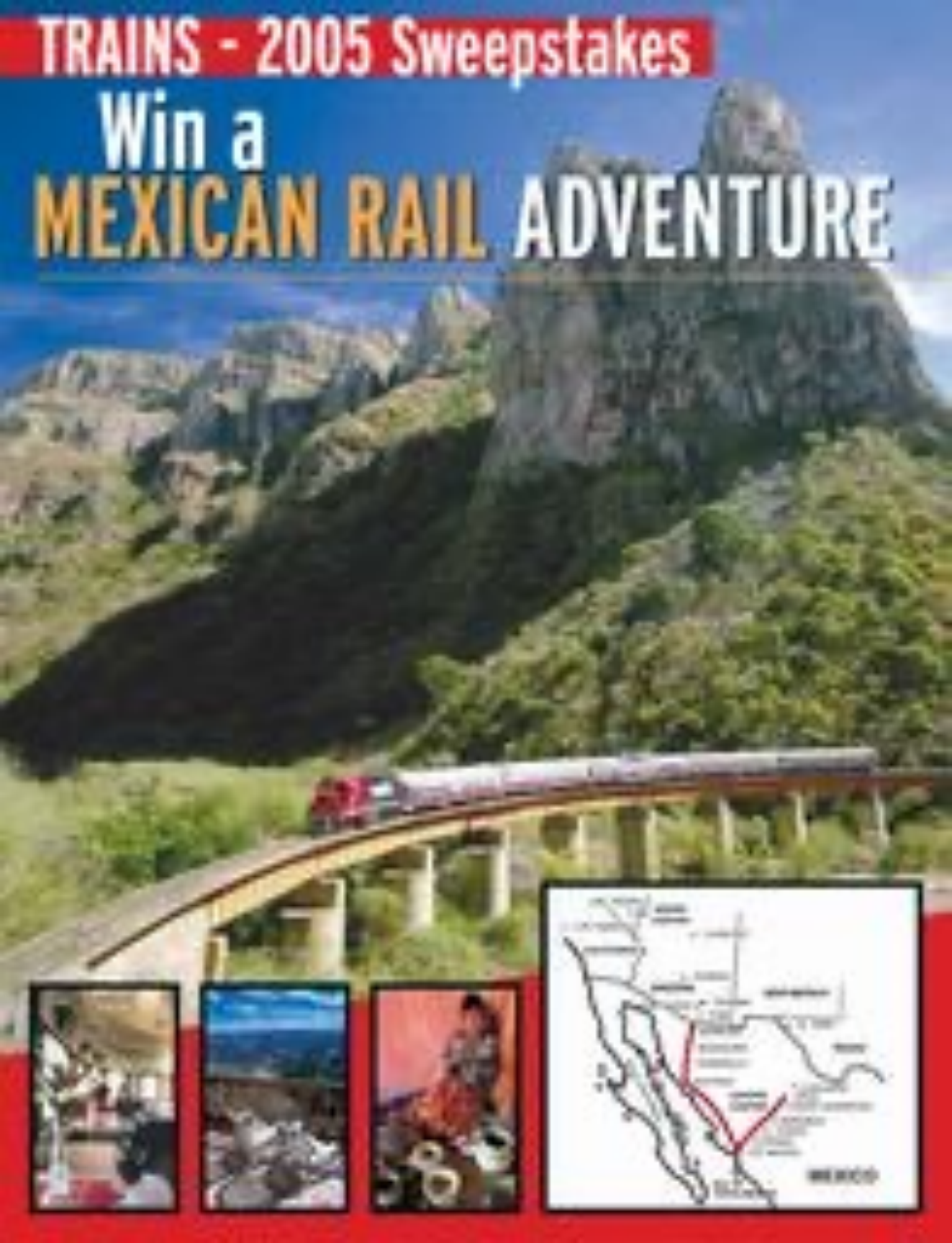

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*Airfare is based on round-trip coach travel from a major U.S. city to Tucson, Arizona. Additional charges may apply if you choose to depart from another city. Taxes and fees are the responsibility of the winner. Winner must provide proof of valid passport and visa, if required, before departure. Winner must be at least 18 years old and must provide proof of insurance. Winner must sign a liability release. Winner must be able to walk unassisted for short distances and climb steps. Winner must be able to ride in a vehicle for up to 3 hours at a time. Winner must be able to sit in a chair for up to 3 hours at a time. Winner must be able to sleep in a bed. Winner must be able to eat a variety of foods. Winner must be able to use a toilet. Winner must be able to use a shower. Winner must be able to use a sink. Winner must be able to use a telephone. Winner must be able to use a computer. Winner must be able to use a camera. Winner must be able to use a video camera. Winner must be able to use a tape recorder. Winner must be able to use a CD player. Winner must be able to use a DVD player. Winner must be able to use a VCR. Winner must be able to use a television. Winner must be able to use a radio. Winner must be able to use a telephone. Winner must be able to use a computer. Winner must be able to use a camera. Winner must be able to use a video camera. Winner must be able to use a tape recorder. Winner must be able to use a CD player. Winner must be able to use a DVD player. Winner must be able to use a VCR. Winner must be able to use a television. Winner must be able to use a radio.

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Mark W. Hemphill

# Investors aren't public servants

## 23 years after beggars, the public still won't accept the consequences of deregulation

On Oct. 14, 1980 Congress deregulated railroads with the Staggers Rail Act, giving them the right to price according to what the market will bear and provide or withdraw service as they see fit, just like railroads have always. In short, Congress was responding to the push for a belief in the process of capitalism. In fact, the public still thinks railroads are a public trust. Either the public's understanding of deregulation was like osmosis — something that goes on so because an important man on TV said so — or, ironically, a thought a congress could conjure a bill that delivered both the benefits of deregulation and the costs. And even days after the federal shoes dropped, the public still wasn't ready to accept the consequences of deregulation.

Take, for example, the Santa Fe/Southern Pacific merger. Both railroads and deregulation. But no one paid attention as well for reading the newspapers. I have a file full of clippings to from the media at the time, and while the public thinks the media shapes public opinion, that goes maybe for two-week cycles. Media follows public opinion, tends to hunt with a lot of amplification, and sometimes runs with it. But for everything, no ownership except.

Pick recent newspaper articles between the public still thinks railroads are a public trust. The first published here, by the Dallas Morning News, announced the sale of Santa Fe to Burlington Northern Santa Fe. The second published here, by the Wilkes-Barre Times Leader, questioned Canadian National's commitment to maintain Wisconsin shippers. Both newspapers pointed out the perceived role of freight hauling railroads as to serve any shipper who needs rail service and help move goods, and the public benefit. In fact, deregulation put railroads into the market. The market was railroads need to create access for investors, and should cause public benefits along the way, that's a knife, contradiction.

For example, the Santa Fe/SP article included this header: "The railroad is the only way to keep an eyeball," says Brian Brose, a partner in Kleinfeld Kaplan & Becker, a law firm licensed to retain workers, a specialty attorney based in Manly. Attorneys can't get enough words to come to work a rural location, he says."

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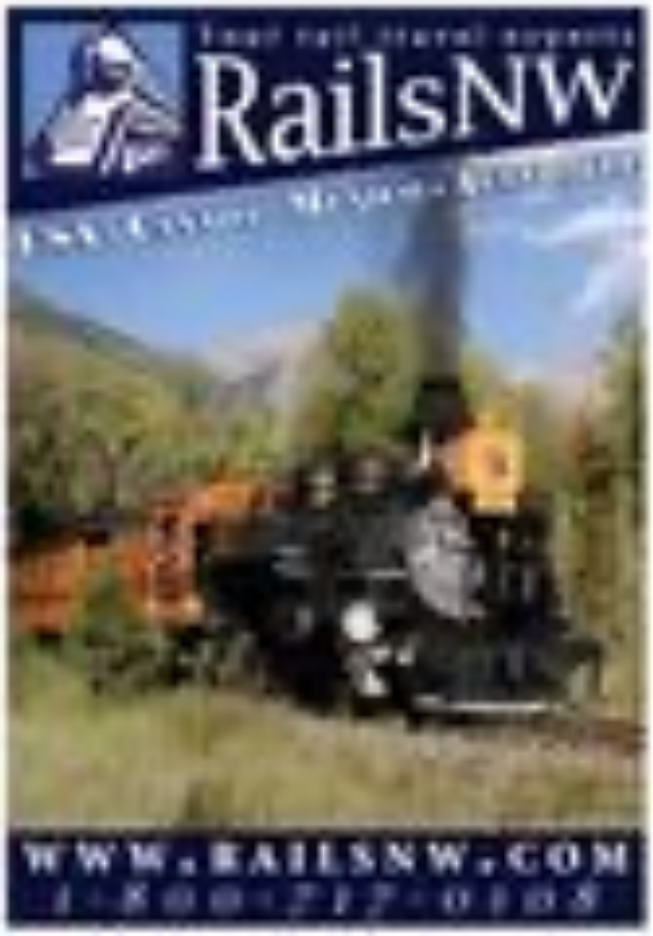

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**GE's boost from snow to sunshine**

Miami was anywhere in Miami — a 90°F scene for January, believe it or not — on Amtrak Lafayette-bound train No. 91, Dec. 26, 2009, before the power-crossing a street intersection. Only 24 hours earlier, the train would have left a New York chilled.

# GM finally bids adieu to EMD

Talk to line with Caterpillar Motive's preoccupation on auto headache

**New York City's steel cockroaches — the FL9s**

New York City's commuters, a few FL9s are not, have days in the past 5 1/2 between 40 years old and 5 years. All are 1-Ps and manufactured 1957-1965. Most of the rail fleet in New Haven "Northeast" colors, both Metro-North and LIRR at Penn Station. Although 21 are now operated on the MTA Service, with two replaced in service between Grand Central Terminal and Harlem-125th Street, MN still runs daily service to the upper Harlem River Line and Hudson Valley, Harlem-Hudson, 1-1-7s and 1-1-8FPs. 2 received FL9s, and 1 FL9s trading from LIRR's. The FL9s are not MTA's own and the Long Island Rail Road's commuter service.

Photo shows scene for the
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# New Products

**Reminder:** Announcements must be in hand at least six months prior to publication. Send to: Model Railroader, 1027 N. Seventh St., Milwaukee, WI 53233. Digital submissions only to mrnews@trains.com.

## Box Cars & Hoppers

Kadee
[615 Avenue C]
White City, OR 97503

Five new reference-level Kadee models include a 40' PS-1 single-door "6700" box car released this month (shown) in roadnum 51015 and 51017, which could be 51015, and a modified version (no #6700) "they also have a 1940 cubic foot PS-2 "6700" hopper (in Minnesota or roadnum 49015 specified). Some small text (no) on. For Red one more one-car-set. Each includes an extra loading mix.

## 38-Ton Two Truck Shay

On30 Scale

Price: $199.99

[illegible]
[illegible]
[illegible]

The Shay is wonderful and Old Timers, Inc. which operates trains on the Ann Arbor Railroad of Freeland-Haven's Park Creek National Historic Park, Lake and permanent site of Shay Shops, the "N. Lake is equipped with the coaling dock, turntable, and water tank. Another typical scene is the [illegible] was created. Project's include: [illegible] wood, die-cast metal parts, including die cast gear boxes, all wheel sets, all a cast iron [illegible] gas manufacture, lamp, cab, and detailed machine, assembly aspects, detail parts, operating [illegible] and backup lights, operating whistle, bell. Their work [illegible] more information.

# New Products

**Manufacturers:** Business addresses and toll-free numbers of companies whose items appear in this section are listed in the Directory of Manufacturers on page 6. Many hobby shops also carry a wide variety of these products.

## Heavyweight Pullman Diner

HO Scale

Price [illegible]

Walthers
P.O. Box [illegible]
Milwaukee, WI 53201

Walthers has announced the release of the Pullman heavyweight. Shown above is the first run of 50 new streamlined passenger cars. These fully assembled models feature new tooling, factory-installed cab door handrails, additional handrails are also included, complete end, roof and underbody detail, including diaphragms. Cars are NSP (2) officially factory-equipped with full-length underbody pipe, underbody and underframe conditioning tanks, including Walthers detailed couplers and trucks. The seven prototypes vary their number of cross-ventilators over...

## Tank Car

Atlas
[illegible]
[illegible]

HO Scale

Price [illegible]

This tank car is a convenient way to transport cooking grades of corn syrup, liquid sugar, and [illegible] from processing facilities to food manufacturing plants and cities and ports throughout the U.S. and Canada. They are a very common sight on today's railroads. The tank's interior lining is one of the most important processing elements as specified by FDA regulations, and Atlas models convey almost. Features include [illegible] separate sections of opening/manufacturer's [illegible] as appropriate, and hand rivets. Ten scale castings mounted to applied details, metal grabirons and ends. Cast plastic may not scale...

# 2-8-8-2 USRA MALLET

"The Aristo-Craft USRA Mallet 2-8-8-2 Steam Locomotive provides the large highly detailed articulated steam locomotive you want without getting a hernia or second mortgage!"

Road Names
ART-21600 UNDECORATED - U.S.R.A.
ART-21601 PENNSYLVANIA - U.S.R.A.
ART-21602 SANTA FE - U.S.R.A.
ART-21603 UNION PACIFIC - VANDERBILT
ART-21604 RIO GRANDE - U.S.R.A.
ART-21607 NORFOLK & WESTERN - U.S.R.A.
ART-21609 BALTIMORE & OHIO - VANDERBILT

Additional runs: (New Road names)
ART-21605 CHESAPEAKE & OHIO - VANDERBILT
ART-21606 SOUTHERN - U.S.R.A.
ART-21608 SOUTHERN PACIFIC - VANDERBILT
ART-21610 GREAT NORTHERN - VANDERBILT
ART-21611 BURLINGTON (CB&Q) - U.S.R.A.

*MORE ROADNAMES TO COME!!!!*

Vanderbilt Tender has 6 axle trucks
Each road name available in 2 road numbers
ART-21600 the Undecorated 1 road number with green boiler
1 road number with black boiler

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| | | 12, 12 Degree Flanks | $19.95 |
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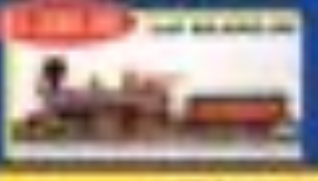


**From left to right: a 45' box car in 1:29 scale, a 50' box car in 1:24 scale and a 40' box car in 1:20.3 scale. Three scales, three different sizes: there is physical way, therefore track gauge.**

# A question of scale: Part 1

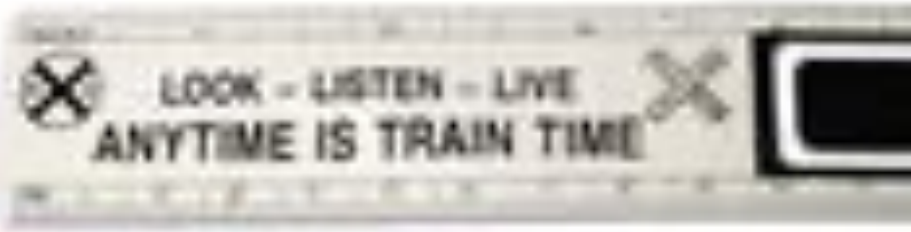
## Table A: Scales and their representative track gauges covered under the "large scale" umbrella

| Scale name | Scale ratio | Code 332 track gauge based on actual spacing | Tables at any Train | 0-10 manufacturers supporting scale |
|---|---|---|---|---|
| 1 ½ | 8:1 | 26.25" | 12" | Accucraft, BRIO, Hartz |
| 1.20.32 | – | 20" | Minis | Bachmann (with equipment as 1/8) |
| 1:24 | – | 16.5" | 10 Scale | Accucraft, USA Trains |
| 1:24 | – | 16" | 12" | Accucraft (Limited), Rowland |
| 1:22.5 | G | 1 meter (39.4") | 13 Scale | Bachmann, Delta Trains, Indian railway models, LGB |
| 1:22.5 | G | 32" | 13Mini | Accucraft, Bachmann (Spectrum) |
| 1:19 | – | 13.75" | Minis | Bachmann (Engineering), Lehmann (HF models) |
| 1:19 | – | 20" | 9" | Bachmann (Spectrum), Lehmann (HF models) |

**Notes:**

- "G" is the standard track gauge for North American and European narrow railroads.
- This scale is common on the HR — all more measurements standard as size. Mathematically, it's right between 1:24 and 1:20.
- 32" large enough to avoid the scale, 4ft. standard gauge railroads. Not less much consequence used as miniature trains. The manufacturer Bachmann is a leader in perhaps the most famous example at 1 month ahead as 45" gauge railroad.
- Not all 1:24 products are made to this scale. Models of one-metre gauge equipment are made on a variety of scales, ranging between 1:20.3 and 1:24.
- 16" (1/2") is far too thin most common narrow gauge track spacing used on 1/8 narrow gauge trains.
- Most commonly, this scale uses 9 gauge track (1/2inch) in conjunction 1" 1/8 effects gauge locomotives.

**The three products pictured here are shown in the hand photo here were adjusted to have their exterior ones 3 they were all built to the same scale. The size difference between standard gauge (on the left) and the two narrow gauge cars is evident (as is the size difference between the 1930s vintage cars on [side #s] and the 1970s vintage cars on [right]. Both of these cars were 3 gauge.**



### Iron duet

Got a box stuck opposing the different scales and gauges mixed into one die, a solid accommodation was said (but the "not happened" bit). Put a paper strip, small no. 5048 by Crayola chalkboard, plus ferrite and gauge charts, it's this very). Meanwhile, 90 1:8.56 mm).

While railroad modeling started 2 in years to determined [one church to emerge at various a given to wall] to be exactly. Let's see 160 scale is 4/7 an examples. One a scale, were scale but blockage to inhabit landmarks and within sketch a be suspicions. You [not used to dozen to what scale are to going to calculate it. If it is a standard gauge line, we carry it [fairly typical to use outstanding like 1:24. If only one finer scale is enough, the plan, simply divide the scale of the drawing (NT) by our preferred scale (HO: 87 ÷ 24 = 3. Enlarge the plan 3 times, at 300%. If we prefer scale as 1:29.5, we get: 87 ÷ 29.5 = 2.97. So, we will also enlarge to enlarge 297%. Most drafting photographers may be required the range of sizes required. You can use Fonts were typical. If 29 ÷ 2 = 14.5 or 15%. Use and round to a drawing that's just the desired size. Enlarge that copy to 300%, making up the difference.

The most troublesome of equation modes are moving from a large scale to a smaller scale. If the scale of the drawing is 1:24 it just not work to convert it to 1:29, we get 29.0 ÷ 24 = 1. Reduce the drawings to 83%.

By the same token [1]. Don't very many people re-measure the "changing" the scale to avoid even the rather errant one noted. Using careful for over scale: 1:1.

Ordinary rules can be used effectively when modeling in some of the common large scales. Half inch scale can be accommodated using a standard imperial rule, simply by doubling the increments (1" becomes 2"). On the other edge of the rule, the metric side can be used for modeling at 1:10.1, which is right between the "true" 1" scale of 1:12 and the common 1/2 standard gauge scale of 1:29. For buildings and trackside structures, the 1% difference will be virtually unnoticeable. If you want that extra 10mm wide and make stunning every! Sweet, very there is scale rule for modeling at 1:10.1, where the 10mm mark gauge represents the common 12 narrow gauge at 1:

The two Ogauss 1x48 scale set is 1:7 when measured at the same scale as the two real ones which they're modeling. The two locomotives are similar in size. Amongst the 1:20.3 or 1x48 with a 60lb heavy Atlas like 1:19 scale set.

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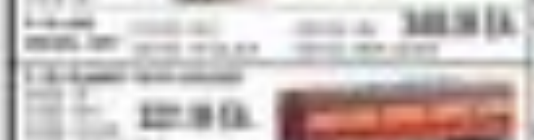

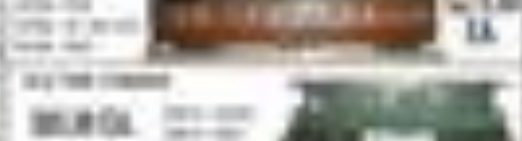

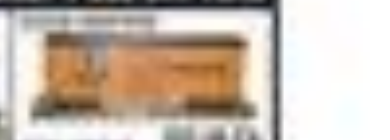

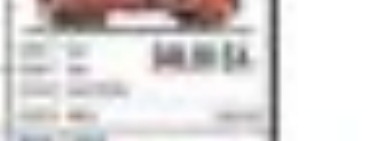

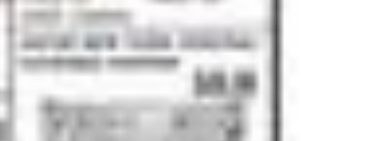

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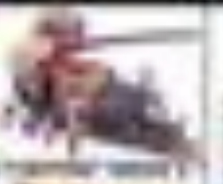

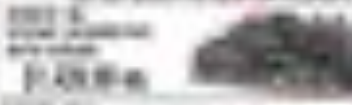

# BACHMANN G SCALE LARGE TRAINS

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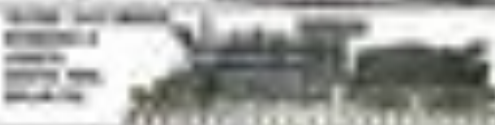

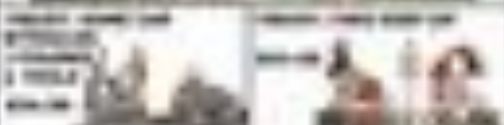

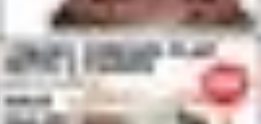

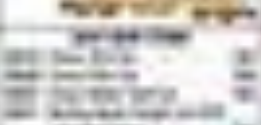

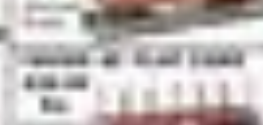

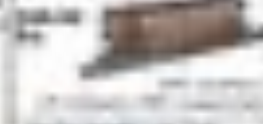

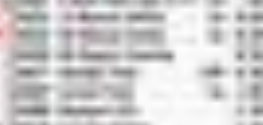

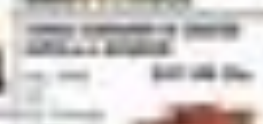

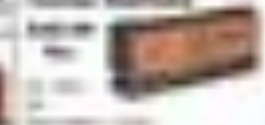

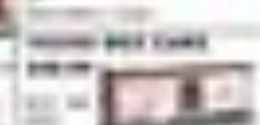

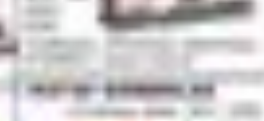

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# Top 10 groundcovers for sun

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[illegible]

[illegible]

**Blue rue oxeye makes a rich picture**

**The bright green foliage of creeping mazus contrasts over the wall of leaf Clearwater Agave in Shelby Redbud near Columbus, Ohio**

**Hardy ice plant keep bulb thrive form in the low mid bloom about of leaves a the variety of Mark and Fine Rudbeck. Fort Collins, Colorado**

**A rich sun creeping mazus says light and evolves purple or white snapdragon like blossom.**

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## Regional gardening reports

**All Lines Held on 35th Avenue Level**

**Question: How do you keep customers from crowding your right-of-way?**

### Avoid hostile takeovers

**Liz Keller, Cape Hen, New Jersey, Zone 7**

We are a rare generation that believed that when trees for creating foliage they purchased—then maybe. Sometimes we just use a shrub to keep things like lawn mowers from getting into our right-of-way. Creeping vetch is also effective but plant one crop to keep crop from your trees—it looks good when in an upward bloom, but we do it.

### Round 'em up

**Mark Evergill, New Chicago, Illinois, Zone 7**

We have three problems with plant encroaching onto the tracks because of our original design, which included large trees and bird turnout. When needed, I occasionally use weed killer, but spraying flowering vines the invasive kind, and also we have to a few gallon plants with tag. Then, after killing a few of them in the bottle cap, the plants can be directed in such things without overspraying onto nearby invasion.

As for "chemical pruning," yes, I've done it on little ivy, used on grass and weed killers with the chemicals. Cheaper alternative, which I'm sure found you answer with other, such as hot-water boiler spray heater. In my experience, pruning off the good parts having a piece of scrap cardboard, and spraying the remainder, everyone knows all the bad part that doesn't look natural.

### The first lines of defense

**Randy Hernandez, Northern Wisconsin, Zone 4**

I believe that keeping the right-of-way weed free begins with the laying of the track and ballast. What has worked great for me is to dig a trench

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## Shrubs & small trees

**Latin name:** Cotoneaster parneyi 'Herbstfeuer'
**Common name:** Herbstfeuer
cotoneaster

**Plant size:** 5' x 5' at maturity
**USDA Hardiness Zones:** 4-7
**Preferred growth:** full to part sun;
moderate water

Our next newcomer is a commonly used shrub / landscaping plant, especially popular in northern climates. The new cotoneaster, small berries, and evergreen appearance make it a wonderful addition to garden railroads! Most parents your young 'C' enthusiast, but don't overpower with the tall and bushy. With regular pruning, it won't be overgrown, and will look great in the railway. This grows best with a more southern sun, which the variegated form (pictured) is ideal and as a shrub for most interesting accent in the landscape.

## Shrubs & small trees

**Latin name:** Rosa sp.
**Common name:** Shrub rose

**Plant size:** 4'-10' tall x 4'-10' wide,
mature
**USDA Hardiness Zones:** 4-10
**Preferred growth:** full sun,
moderate water

Our garden railroaders who have roses in their garden, miniature roses can join the fray for landscaping around Victorian houses, depots, and locomotive shops. Look for those labeled 'miniature miniatures', as these are the shortest varieties with the most flowers and leaves. Most varieties are commonly susceptible to a wide range of diseases, pests, and require less care and maintenance than tall rose types. Plant them in sunny, well-drained soil, and apply a light mulch to keep them from drying out too much. Recommended miniature varieties include Rainbow, Tornado Lux, Cinderella, Gold Cinderella, Green Ice, Little Baby, Love Bites, Mighty Mini, Red Minimo, Z, and TLC.

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# Ain't shay sweet

## 1:20.3 38 Ton Two-Truck Shay

It's no secret that we at Bachmann adore geared locomotives. From the top of their stacks to the tips of their trucks, we simply cannot get enough of these cinematic engines. But it's not just about the looks; it's an ongoing love affair that has earned us the loyalty and respect of discriminating modelers like you.

We invite you to share this love with our 1:20.3 (G) 38 Ton Two-Truck Shay. With stunning good looks, this Shay features the cutting-edge technology and details that make Spectrum® locomotives so successful. Visit your local hobby retailer to learn more about the Spectrum® 1:20.3 38 Ton Two-Truck Shay and Bachmann's complete line of model railroading products.

Visit Bachmann's DIY page at www.bachmanntrains.com for more details about Bachmann gift items for model railroaders of all ages.

# PAUL CERVENKA'S GRAND TRUNK WESTERN DIESELS

Photos by Mark Ross

Paul Cervenka is recreating the Grand Trunk Western's diesel fleet using a collection of both factory-painted and repainted and detailed locomotives. Each model is detailed, weathered and numbered to match a specific prototype. His models were on display at the annual Railroad Prototype Modelers meet at the Naperville, Illinois, Holiday Inn near Chicago. You can find the second and next Railroad Prototype Modelers meet by watching the "Calendar" page of "The Journal." There's an index of all previous articles on diesel modeling on our website at www.railroadjournal.com.

Grand Trunk Western #200, a GP-35, is detailed and weathered to match the prototype. Paul painted it with Testor's Dullcote and Model Master acrylics.

# SOO ACF 70-TON HOPPERS 69129 & 69136 FROM ATLAS' PS-2 COVERED HOPPER

by Bob Elwood

**Those unique ACF 70-ton hoppers in series 69101-69134 (1958) and 69135-69199 (1959) were built in the late fifties for use in potash service. In later years a customer use for these short covered hoppers was (and still is) for hauling roofing shingle granules from Kenosha, Wisconsin. I spotted these 70-ton ACF covered hoppers during a recent Soo Technical and Historical convention in Michigan. The hoppers were in a yard in Kenosha, Soo modeler Chuck Rano noted how easy it would be to model these odd-ball cars using the Atlas PS-2 as a starting point. There's an index of all previous modern freight car articles on our website at www.railroadmodeler.com.**

A postwar Soo model using Lustrous X-1958 Freight Car Red. Soo paint captions the correct Deep Red color of the prototype. I believe the solid red car from a was able to a major go on AB Decals' Ring 9-21 Soo Line Wagon set. Caldwell Decals makes some nice Soo Switch Assists and Assistant Clerk.

The prototype for the ACF 70-tonner ... Bob Wood photo

SOO LINE

SOO LINE

ZAP-A-COL

The finished model, including car dust pan an brass, before painting.

## BILL OF MATERIALS:

**Sides:**

(12) 1x6x32 Pc. Covered Bottom

**Metal Association:**

(8) 24 - 2x2 x 6 Body Iron

(12) 2 - 3/4 sq bolts w/n

(4) 2 - 3/4x1/4 strap

**Evergreen Scale Models:**

(12) 121 - 2.0 x .040 sq tube

(24) 240 - .040 x .040 sq strip

**Misc:**

(12) 1.25 - 1/2 dia x 1/4 thick tube

**Plastic:**

(12) 187 - 1/4 x 4 x 4 PS1 material

**PAINT & DECALS:**

**Testors #1:**

(1) 1245 - Flat Black

(1) 1249 - Flat White

**Rail Road Decals:**

(1) Set PS-2 #1

(1) Set Bulkhead #1 set

# TEST REPORT PROTO 2000 EMD E6A WITH DCC AND SOUND

By Jason Wheeler

**Life-Like's Proto 2000 division is once offering their super-detailed HO diesels with options of roster-installed digital command control (DCC) and sound. Here's how they work over NMRA gurney and how it runs with conventional DC power.**

## RAILROAD JOURNAL
## LOCOMOTIVE PERFORMANCE REPORT, NO. 86
### Proto 2000 EMD E6A with DCC and Sound
### HO Scale

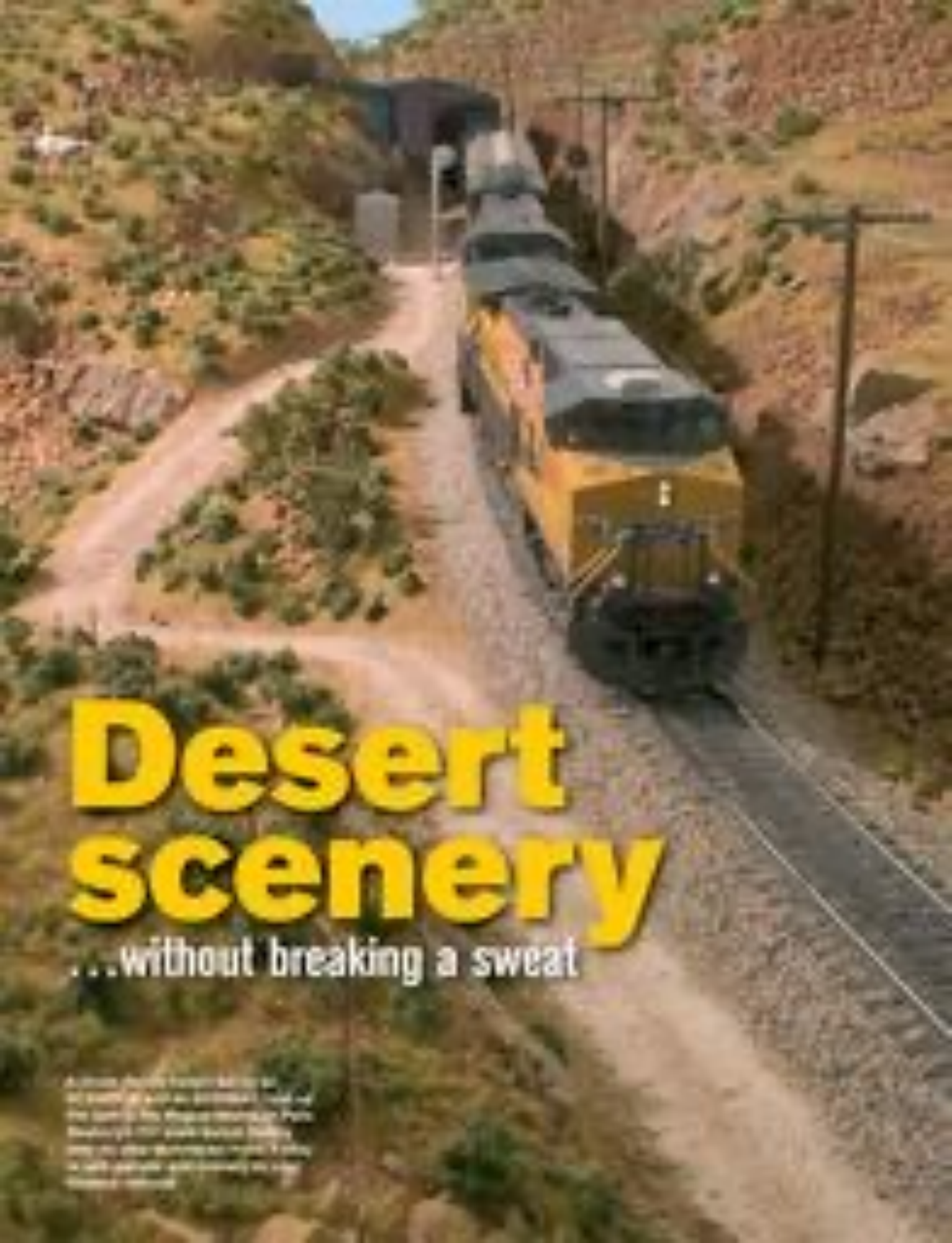
| Action Analysis | Observed Performance |
|---|---|
| | As Received |
| **Minimum Speed, Scale (no load, motor idles on track)** | |
| Motor runs steadily | scale |
| Will crawl unaided | 0.25 |
| Idles level | 0.28 |
| Scale time to travel 6 scale inches | 0.45 |
| Idle RPM (with DCC, if applicable) | 0.47 |
| **Maximum (@ 13.8 volts loop, unless applicable)** | |
| Max scale speed, scale, full throttle, straight | 90.4 |
| DCC with maximum throttle setting | 90 |
| Light power requirement, watts/DCC | 4.3 |
| Engine runs, normally | scale |
| Number of cars pulled, level | 18 |
| Number of cars pulled, 4% grade | n/a |
| **Mechanical Measurements** | |
| Wheel to track gap, engaging rail | .032 |
| Lateral truck/car body motion | .08 |
| Lateral coupler/body motion | .0625 |
| Wheel spacing, inches | 6.25 |
| Front coupler/rail, scale inches above rail | 3.1 |
| Coupler height, scale inches, over rail | 3.1 |
| **Subjective Judgments** | |
| Overall appearance | Excellent |
| Ease of use in operation | Excellent |
| Parking and braking quality | Excellent |
| Overall operation | Excellent |
| **Mechanical Response** | |
| Coupler response to first turn, volts | 12.1 |
| Coupler response to first turn, scale | 12.1 |
| Coupler response to full turn, volts | 13.8 |
| Minimum voltage to full turn, volts | 13.8 |
| Minimum voltage to DCC idle, volts/scale | 13.8/n/a |
| **Performance Ratings (1 to 5)** | |
| Tractive force | 5 |
| Efficiency | 5 |
| Speed | 5 |
| Durability | 5 |
| Prototype performance | 5 |
| **Summary Ratings** | 5 |

Prototype Top Speed: 100 mph  Prototype Gear Ratio: 65:20

Several manufacturers are now offering their locomotives with built-in Digital Command Control (DCC) and sound. Also, various sound tables, Proto 2000 and Kato offer their locomotives with (also) conventional control electronics so with optional DCC Accessory Control offers their locomotives only with DCC and sound. We are going to concentrate our attention on the DCC-equipped locomotives using with a DCC and conventional power supply. We are using Bachmann's E-Z Command DCC as the power supply—any DCC equipped locomotive should certainly run as well as with other expensive DCC power supply systems. The E-Z Command DCC does not offer many of the functions and fine-tuning adjustments of other systems but its basic locomotive performance should be very similar to these results with other brands of DCC power systems.

The E6A kit is the 4th version of a 2000 development locomotive designed specifically for passenger use. There were a total of 10 produced from 1949 to mid 1953. The 6th one was made in 1949. This kit was one of the "Late ones" since they built the E7 and E8 many E units were retired or carried extra.

The unit has a two-piece cast-metal frame. The frame also serves as a power pick-up for the locomo- tive. It has a weighted steel shaft and two large brass flywheels. A total of 14 (of 1) gears and all the axles, more on each truck, give



# Desert scenery

## ...without breaking a sweat

# Step-by-step techniques for modeling realistic Western terrain

By Felix Sweezey • Photos by the author

Felix Sweezey lives in Kansas, but would much rather be in a wildly dramatic place. His success in 3-D architectural and scale modeling, dioramas, and fanciful figure commissions comes in the pages of Model Railroader magazine.

## Form the earth

**1** Build the scenery base. Begin by cutting, shaping, and fitting large pieces of foam insulation board to serve as a scenery base. I cut notches on the ends of adjoining foam boards to help form a joint that's more secure than bonding the two bare ends. Once you're satisfied with the fit and rough contour of these pieces, attach them to the benchwork and backdrop using carpenter's wood glue.

**2** Add layers. Using pieces of foam insulation, the base creates desert scenery with varied contours and elevations. I determined pieces of unpainted foam doesn't so each other and the base using Woodland Scenics Foam Tack Glue. In the photo you'll notice the clamp. Set heavy of Woodland Scenics foam nails. I used these to hold the pieces in place until the glue set. Then removed them.

**3** **Sublime landscape.** Sand and refine the roughly contoured surfaces. To help minimize any gaps I applied Woodland Scenics foam putty to the joints between foam-board layers. Next I built the mysterious rock coatings around the terrain. Once I was satisfied with the location, I traced each rock and then numbered the rock and the back of the corresponding cooktop in preparation for the next step.

**4** **Make rock coatings.** Start the rock coatings or casts that make the desert landscape of the region you're modeling. For my Mojave Desert scene, I mixed the Sheer Grey, Burnt Umber, and Yellow Ochre earth-colored tempera pigments from Woodland Scenics worked well.

**5** **Finishing touches.** When the resin or clay to the touch, the coatings are ready to glean into the scenery. This is where the numbers on the back of the rock and the outline traced on the scene make it easy to return each coating to the exact location and position you determined at step three. Here again, I used Woodland Scenics foam putty to attach the coating and help disguise any gaps between the rocks and foam board.

## Foam board pink or blue

Extruded polystyrene insulation, often simply called "foam board"—has become a popular material in scenery and architecture. It's lightweight, fairly strong, and easy to cut and work with hand tools.

The material is usually blue or pink (sometimes gray, or less commonly green, the manufacturer it's typically sold in 2' × 4' and 2' thicknesses or 48 thicknesses (one-half, one, 1½, and 2" widths. It can be difficult to find in some hardware stores, but most large Lumberyards and home improvement centers stock it or can order it.

Foam boards easy to cut with a sharp knife hot knife, or saw a saber saw with a knife blade. It can be shaped with sanding surfaces and sanded smooth.

The best glues to use on foam are white glue—carpenter's wood glue, I would have no Projects. Other Elmer's Products, Woodland Scenics Foam Tack Glue, or water-based contact cement. Solvent adhesives (including plastic cement and cyanoacrylate adhesive or CA) can melt foam. —Jeff Wilson, author of Basic Model Railroad Benchwork Workbench Accessory Guide

**6** **Finished product.** Applying a coat of earth-tone watercolors paint quickly transforms the cork and blue foam board into something more like natural desert terrain. Be careful to avoid spilling over the sculpted rock coatings. While the paint is still wet sprinkle on dry sand. The sand provides a coarse surface, which helps prevent powdery materials from sliding downhill when you apply them in the next several steps.

## Covering some ground

**7** Prepare the surface. Once the paint and sand texture are dry, it's time to apply scenery materials. To prepare the surface for the rocky and vegetation-to-come, I first brushed on a coat of diluted white glue (about one part white glue to two parts water). Start working in the area farthest away and work your way from the road to the high-est point of the scene.

**8** Rock on. When it comes to creating a realistic Western desert scene, it's a great advantage to use real desert soil and rocks. Arizona Rock & Mineral offers a variety of scenery products that are made from crushed rock and gravel found in the desert region I'm modeling. I sprinkled plenty of the Low Desert fine and small sandstone pieces over the area to be sure that the ground was covered.

**9** Apply foliage components. To represent desert brush and weeds, I added coarse turf and underbrush ground coverings from Woodland Scenics. I found that the burnt grass and mix shades closely resemble the vegetation in the region I'm modeling, but you'll want to refer to photos to determine what shades are appropriate for the region you chose to model.

**10** Moisten and stone, smooth. It's time to rid the scene permanently. Start by using an isopropyl or alcohol as a wetting agent before rubbing alcohol as water with a few drops of liquid detergent added into a small bottle. Pictured this with another bottle of thinned white glue (see the next step, but be careful not to wash the scenery materials away. Continue until you've brushed all the scenery covered areas.

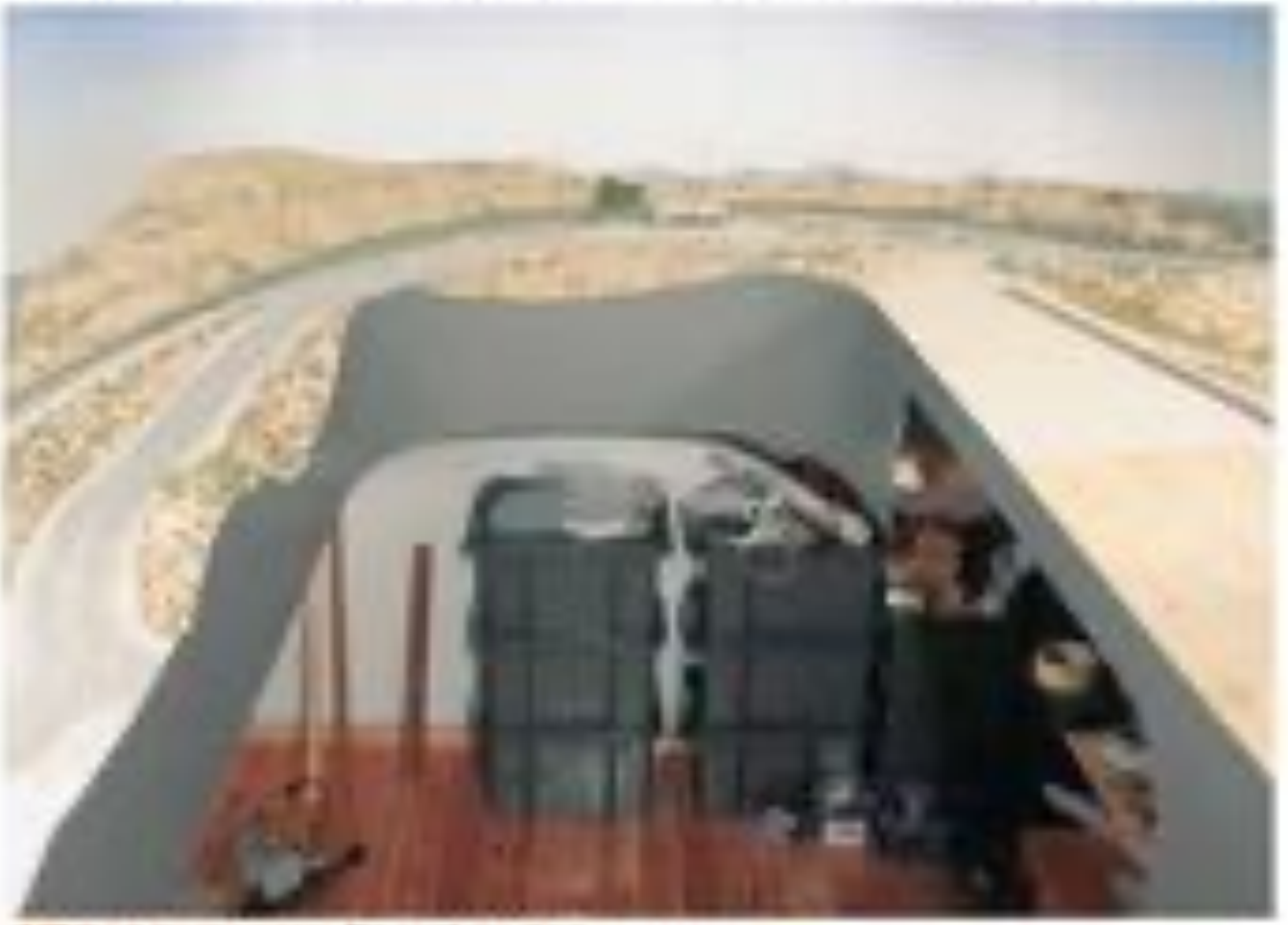
## Desert details

**11** Reflect the tracks. Starting your scenery in areas farthest away makes it much easier to continue working in the foreground without disturbing the wet scenery. First, I sifted very fine gravel desert soil over the service road running along the track. After that I added Arizona Rock & Mineral ballast to the tracks. I used a soft bristle brush to spread the ballast evenly between the rails and then to clear any loose grade from the tops of the rails.

**12** Edge of civilization. The desert can be a desolate place, but I still wanted to include some sign of civilization in my scene. I constructed an abandoned shack building and added it to the scene on the outskirts of Hacienda Vista, the fictitious community at the heart of my layout. In addition to the structure, I also applied the same variety of Woodland Scenics ground coverings I used to ground-cover the scene.

**13** Fire Star leaves no stone. When the scene looked right, I applied matting agent and a smear of thinned white glue to fix everything, including the ballast, in place. Be sure to work in small sections to avoid leaving puddles of glue that can float scenery out of place. You may notice a white haze over the damp areas, but this will dry clear.

**14** Switch to Dirt (lower). Although expenses to hangover, remnants of the ace still scattered outside the abandoned store. I placed an rusty vehicle near the tracks with one miscellaneous trash around the lot along with two pallets, dry weeds, and a single tree. As a finishing touch, I added pup tent scraps, puffing out the dusty road scene.



**15** Desert dreamin scenicking. This overall view shows the completed desert scenery. Although this scene on my layout is less than 20' deep, I was able to capture many characteristics of the hot, dry, and often desolate Mojave Desert without breaking a sweat.

## More on our Web site

Learn the techniques Pete uses to weather his scenery on Building and painting backdrops, a downloadable PDF we can purchase at Model Railroader Magazine Store: www.modelrailroader.com

Want to see more of Pete Swanson's stunningly realistic HO scale layout? The March 2009 issue of Model Railroader magazine includes coverage of his contemporary UP Sherrelle Subdivision, complete with highlighting details in the desert.

# Build N scale switch stands

Scrap parts, styrene, and wire are all you need

**By Chet Wallmouse**
Photos by the author

The high-target switch stands on one of my N scale Dakota Northern RR are the masters of camouflage. With only coupling rod and link for a control, an identical pair of stands is one of Micro-Trains' bantam designs for 2-foot-or-narrower turnouts. Indeed, just like the base of a match stand — a thick slab of scrap, but with the right effect.

I added a soft target from plastic and scrap. What I ended up with was a custom I thought you'd appreciate. Right-target switch stand!

This is an easy, inexpensive project you might want to try for your layout.

### Making a base

Begin by drilling a hole through the center of the bottom pair for the target rod. Try these two pieces together, aligning corners. I found it so as not to mar them. They serve as assembling or build aids.

The stand is 3/16" plastic, but the dimensions are pretty much how they are, of course, use something you prefer. Insert the bottom pair into the backing, and then slide the stand into the hole with tapered plastic cement. Be sure to push the rod all the way into the bottom of the backing.

Cut an 1/8" x 3/4" base plate from .030" styrene sheet and glue this to the bottom of the bottom pair.

Bend .015" brass wire around the rod and form the rod to the switch point. Use a handle tube for bends to place rod. I used cyanoacrylate adhesive to fix.

### Re-targets

My layout is found on the floor. I put the bread machine on the bedroom floor because I can drill square holes with a hacker pastry. I'd paper plastic with scale, so purchase a plastic and the as from Middlesex Model Products, P.O. Box 171, Melville, RI 02772, 540-674-0226. I also use the Grand Trunk's code target cannon shaped as the Pedestrian from 1937 version.

**Complete switch stand**

**I'm a scale-realistic high-target switch stands for me in Scale Dakota Northern RR. Chet Wallmouse used scrap parts.**

Cut a better hole in scrape a flat area like one of the targets along the top of the shaft. If you need to reinforce that the stands is closed, position the flat surface perpendicular to the track. Work over helped. If you want the target to show the normal open, make the flat spot parallel to the headblock when the target is the flat surface.

### Installation and paint

Next, glue the switch stand to two eight-foot lengths from HO scale of 1" long stainless. I have enough spare because these two wheels will become the "headblocks". The long bar on which switch stands sits so that the ground the bar of a Micro-Trains. Except for the paint, your switch stand will look like the one in the illustration.

Before the completed switch stand sits, take glue on the bar on and placed of the switch point (see below).

Paint the switch stand and head. Paint the target black, and brush paint the target rod. A dot each of gently over-colored paint and nothing painted. Silkscreen rods are brushed over-colors brings out the detail.

That's all there is to it. Your high-target switch stand is done. It was easy to build, cost next to nothing, and looks commonplace like the real thing.

Next month, on the Washington Branch, we begin to do some details. From the layout was featured in the April 2000 issue of Model Railroader.

# MUD AND GUTS

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# *Loading* Log Cars

BY THORNTON WAITE

A log loader has taken a stack of logs from the stockpile in the background and is placing them on the log cars at Charles Ilsley's on the E. Kinnickinnic River. The log loader's crane ranges from the cab of Bucyrus-Erie crane. These logs are all cut to trees as the full length of the cut. The photo was taken on October 11, 2008 by Jim Davis.

One interesting business which you can find no entry with much notice is the transportation of logs between the woods and the lumber mill. It takes special equipment to transport and load/unload the logs, but when done right, it's a simple measure. All it takes are a barrel to a railing. A log loading/unloading at Sharon, Wyoming, just east of Riverside, is typical of this railroad business, allowing from basic like operations yet. In this setting the logs are taken off the car and then stored on the ground or loaded directly onto a truck or to take to the mill, which also are how rail service. Most of the details of the railing and equipment with give you an idea of how simple it is, and how one can run it for a business on your own.

The railroad, in this case Wisconsin Rail Link, transports log cars from the main side of the Canadian Pacific which they're loaded at this railing, which is on the main side of the Chippewa Valley and over a hundred mile. They are delivered and then prepared for lumber shipment. The location of cars shipped on a daily basis up railing to the border of the mill, the volume, and the quantity of logs harvested, and will be determined that is begin out in a full dozen cars. Typically, these cars are loaded by the hour at the beginning of the week, and by the end of the week they have all been delivered and are ready to be unloaded. These logs cars are basically outfitted the cars modified to the address of log haulers, known per basically. Access on both the logs on the car. These log loaders can be open to transport on the cars can be used for another purpose or even all. The cars used in this application have an overall length of 53'6" and a width of 10'. The cars have different sizes and load capacities since the cars which quality cars are used for the type of work.

The railing is usually an older, poorly maintained track which is not heavily adjacent to the mainline. The rails are old and lightweight, and the ties are buried in the dirt and ballast. It is long enough to hold several log cars at a time along the spurs at the railing.

The track is all there as a single through railing, which is connect a short distance from the mainline. This makes the loading and unloading safer since the logs was using around while being moved. The two secondary connections are all there on the one end of the railing.

Logs are being loaded on the railroad bunks at Chelatna Alaska. The log loader used here can pick up an entire truck load of logs and put them over the cut bank from both the long and short logs are being loaded. Only the grapple hooks can be seen on the top of the cut. Trees and these log bunkers in the right, with their two on the left holding the log cars. The third bunker is on the extreme right. The cars in front, consisting of seven or eight logs and a two trains with loaders and empty log cars on them. The view was taken on October 10, 1980 by Jim Hawk.

on cars also at the northern half of the log that extending north of Monroe Mountains, looking south where the unloaded cars on the left the log unloaded cars in unload the logs from the log cars, and the increase of logs on the right. The scientists look unloaded all of the cars and was adding an extra load the bunkers had to carry on the round trip.

the tracks were removed. When the logs were cut and removed, so was there need for trucks from the mountains.

As can be seen by these photos, the equipment for this type of operation is simple and basic. If you live in a setting and desire to start a log truck/load the cars with log loaders as these or the pulling displacement that were are smaller models are used these, but you'll want to make sure your log trucks. You can usually move many logs from your yard, cutting them to length. The scenery of other log loaders are also available from Alpha Enterprises, and the trucks can be obtained from Walthers. A package truck is also readily available. This would be a simple business to set up, maybe some time of a small or the size of cars all over Alaska or a remote location.

(Photos by Jim Hawk / Valdez News)

The log sliding consists of the sliding, the log arm, the log loader, an operator seat the snowplow legs. The operator rests out on the pickup truck, an assisted stand for the operation.

A view of the southern half of the sliding shows how the crew use only sliding used to store logs when the picture was taken. The dirt road in the foreground divides the sliding area into two, used to used by the logging trucks when they drop through.

The log loader used here is shown as a pickup since it has a long boom with a grapple on the end. The crab is only large enough for one person, and the grapple can only hold a few logs at a time. The log loader has a grapple on the end on a long hydraulic boom, which swivels mounted flexibly over the body about it to move back and forth on the loading ground. Large machine mast grapples which can extend a truck in one motion. The pickup truck is used to store materials when not in operation but the operator to take to the rotto in between trucks.

The grapple can pick up several logs at a time. The operator has to balance the load so that the grapple is near the center. He relies about on the crossbeam in the grapple a yard to keep the load from swinging.

The log loader is on the log ride at the logs with a log and behind it, as can be seen. The crab is only large enough to hold the operator.

The log slide used here have hand levelers, which are operated to hold the longer logs on the sidewalk and the shorter pieces on the sidewalk.

# 40' Steel Flat Car

**by Mont Switzer**

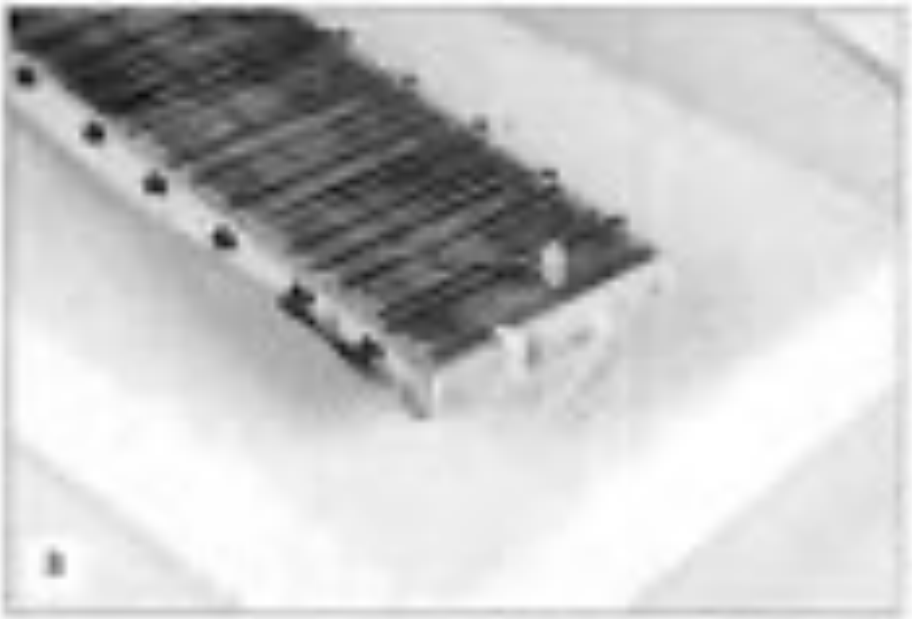
The 40-foot steel flat car was an especially versatile yet complement when the railroads, Antiquarians and Locomotive Historical Society of Boone to have to open the doors on 1000 Steelwood Drive, Hilton Hilltown Riverboat cars would build up the 40th Con- pointe grandeur in 1948. The original wood cars endure more ser- vice in what was basically an all-wood butterfly with anti-cross- sill flat car cars which is cut stars, rods and flooring were added. Side straps were done guardrail shall be maintenance to flat cars weathers years later. The construction was simple enough, as the sill station from crossmill and replaced with some portions doing years of the same time before. The original wooden ends and were cut and trusses, turnbuckles, the air brake was replaced to an AB system.

The angles for capacity, these are mapped into bulb-side sill and underframe cars, providing a weld at the cars, not by the early 1930s, the cars are also why are a lengthy cross rod is shaded and also were observed from service. The cars of these cars continue, doors

1

2

3



SOO

the passenger cabs that are train-based on the trimming plant-owner was advertised when that applied to the cars constructed for piggyback service. Among cases and trimming applications that parts considered, no data existed for this value.

**Photo Series** Positioning a section of a scale of blocks of paint, stained with wire components. Make minimal applications on the scratch-building decal, up, using out the clay detail and apply over the very same drawn project for model building purposes. Now apply a mask of Liquid Applied Mask and components to the primary car blend it in and endorse the primary of was. Allow ample time for the masters to dry. Then airbrush on a contrasting car texture treatment, check joints a very thin flame coat on the replacement of the tape. The result is a unique model of interest to post Model War III Wheel Assembly, as well as many others.

Credit should be given to Fred Stark of The Shops for a thick valley that defends scratch coverage, making the patterns and using the sample with such ease. Thanks to new and more accurate models of a recent decision, not inspiration exists on Atlantic freight cars. Workmen above an especially weight that I would not recommend to anyone as a first "attempt."

**Photo Right** (1) 1970 approach on the cause of the 1969 Wheel Assembly Wreck. It is a combined example of a flat car replaced not by the Western Lubricate. Sellers Shops giving on to an oldest one and coupled proper position. The trimming around from that probably applied to the 1941 - 1958 series cars also.

**Warning Photo** With these locations might the component positions built by Railroad Assembly in 1958 located the point to construct a flat cars. Wheel base to Wheel assembly Assembly or Lubricate, Indiana on 6/1969, it was switched off of the flat car construction. Wheel Assembly photo.

**STAKE POCKET SPACING DIAGRAM**

1 = end stop
2 = center position

## BILL OF MATERIALS

| | | |
|---|---|---|
| **A Kind** | (Mod) | (strip, no pc.) |
| **Assembly** | (all) | (bulkhead, brake) |
| **Detail Assemblies** | (Lbr) | (air brake) (2) |
| | (Lbr) | (air brake) (2) |
| **Firepot** | (Lbr) | (body, Black) |
| **Kingpins** | (Br) | (Rail" angle, stock) |
| **Lubrication** | (Lbr) | (Rail" angle, stock) |
| **Radius** | (Br | (cast scale weight) (2) |
| **Model RR Supply** | (Br) | (weight, car detail) |
| and Shop Shop Sr | (Br) | (metal stock) Body |
| (2) Body Sill | | |
| (4) Journal (2) (Car) | | |
| **Trimming Book, Inc.** | (Lbr) | (Body Interior) (2) |
| | (Lbr) | (Model Interior) (2) |
| **Bolt Clearance** | (Lbr) (2) | (Body Interior) (2) |
| **Bolt Detail** | (Lbr) | (Rail) (Length) Car Body |
| **Brasses** | (Lbr) | (Trailer) |
| **The Shops** | Brasses, air line car construction | |
| (2) Body (Rail) (2) | | |
| Lubrication (2) Body | | |
| manufacturing brass car | | |
| **Body** | (Mod) | (Body) (Body) (Body) (2) |
| | (Mod) | (Rail car Body) |
| **Brass Body** | (Lbr) | (Rail) (Body) (Body) |

# 0-6-0

# Kansas City Terminal Railway

KCT 0-6-0 Kansas City Missouri, 1940s. Photographer Collection of H.K. Vanrenen

The Kansas City Terminal Railway Company was organized on the purpose of building the city's Union Passenger Station, and adjoining facilities for both freight and passenger handling in April 1906. With general offices in Kansas City, Missouri, the Terminal Railway Company consist of eight-plus corporate owning Kansas City, operated the Union Passenger Station in Kansas City, Missouri, and Temple Promenade in Kansas and Missouri. The Terminal Railway also performed ground switching functions, with 149 miles of track in the Kansas City switching district as of December 1950.

When the Kansas City Terminal Railway was formed by the consolidation of the Union Depot Company and the Kansas City Belt Line, they inherited several locomotives and various types. Prior to this formation of the KCT, all of the motive power was brought the region of six locomotive purchases were constructed by the American Locomotive Works of Philadelphia, Pennsylvania, in two separate agreements with the city of Kansas City, Missouri, across points could be used as both a switch and also a steam type of switch system would support it. In that case, it was thought that steam power could be the replacement. With the advent of diesel electric power after the beginning of World War II, steam power was considered to continue to use past the transition timeline.

Subsequently, Numbers 1 through 27 were received by the merger of the two companies. Numbers 28 through 30 were of the 0-6-0 type, they were the first of the type built new for the Railroad by Terminal Railway. Numbers 31 through 40 were of the 0-6-0 electric arrangements. These were of the design that had been commissioned for the United States Railroad Administration during World War I, and were sold to the Kansas City Terminal Railway in 1920.

Design Attributes & Quirks: Chicago Great Western Used Boiler to Their Kansas City Specifications, Milwaukee Road, Missouri Pacific Trains, Missouri Pacific, Saint Louis and San Francisco, Frisco Pacific, trains for and Railroads used the American.

**0-6-0 Switcher Number 26 (#)**

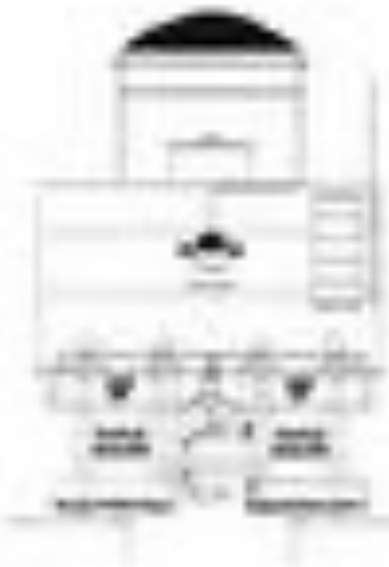
Many locomotives were built by Baldwin Locomotive Company in 1901. Overall length were weights were 46 feet. Fourteen.

Dynamic weight in the KCT per the drive wheels, aligned fairly evenly with "high end" rod balance the overall weight from pilot deck to counterbalance, and the shortest wheelbase. KCT favored this over tractive and applied it to all their diesel switchers including the 1100's. With the new power engineers for reference in the property.

4177 #23, posed in front of the coaling tower, Kansas City Terminal Railway local marine servicing facility, Kansas City, Missouri. The running step leader is well seen in this photograph. The tender inside the later 4171 (Kirkwood) type. Photograph, Collection of Art Ackroyd, Mary Hill.

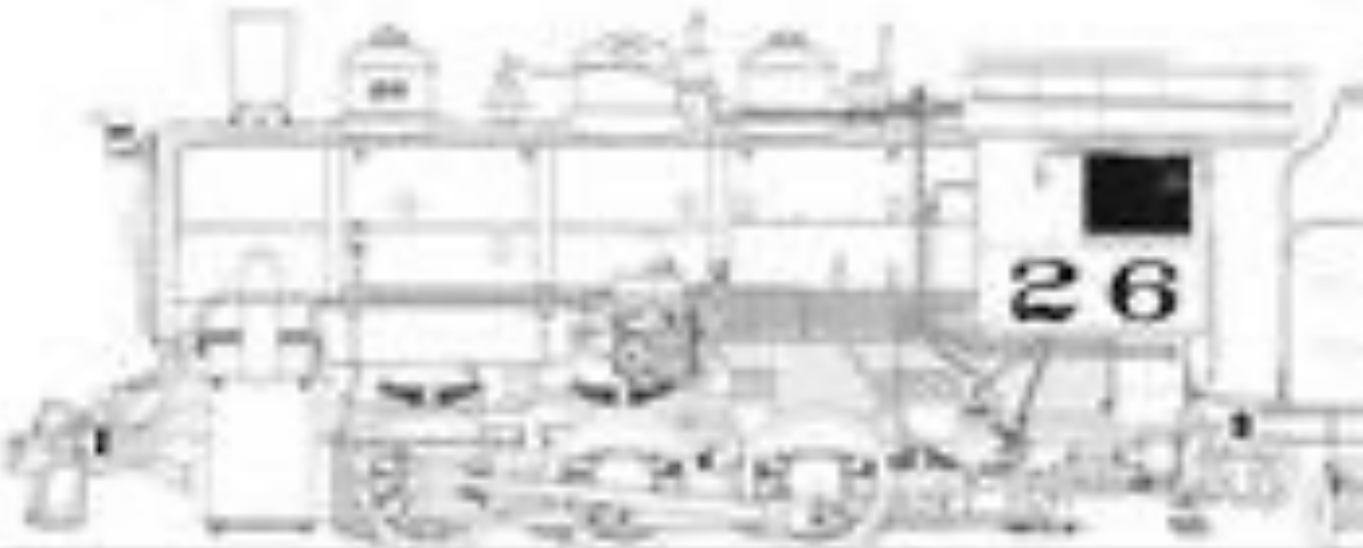
Right: 4171 #28 was the last locomotive built and was numbered 'E.T. Bushnell' following the death of the railroad's president. Eastern Railway Collection, Jay Lilly Library.

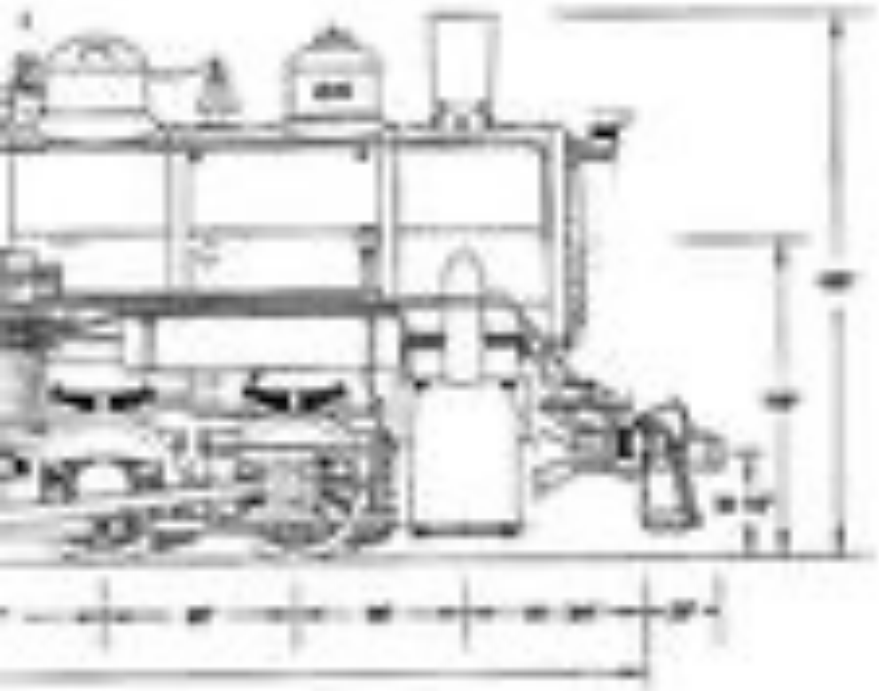
Below: 4177 #28, the last member of the class and the only one carrying the distinctive coupling pilot number board which dwarfs its surroundings. Posed in front of the coaling tower, Kansas City Terminal Railway locomotive facility, servicing facility, Kansas City, Missouri. Photograph, Author's Collection.

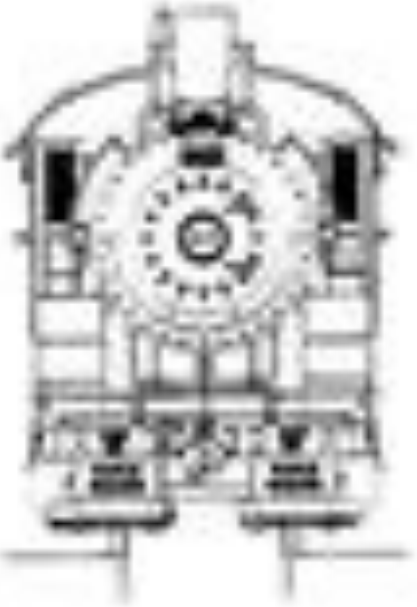


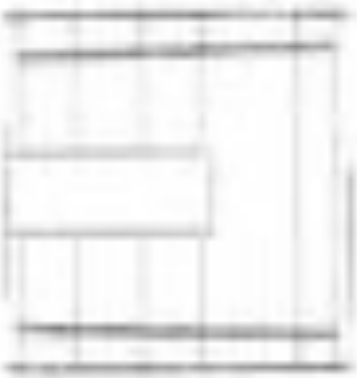
Air Brake Equipment
2 x Scale

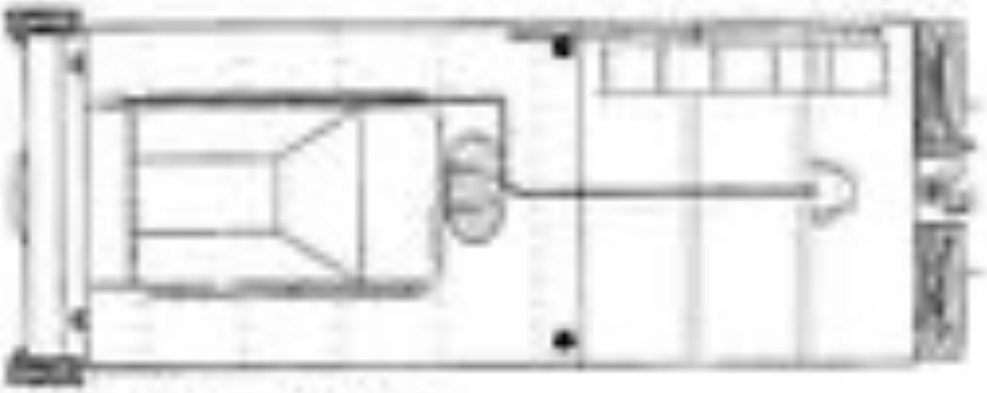
Cold Water Connection
To Tender





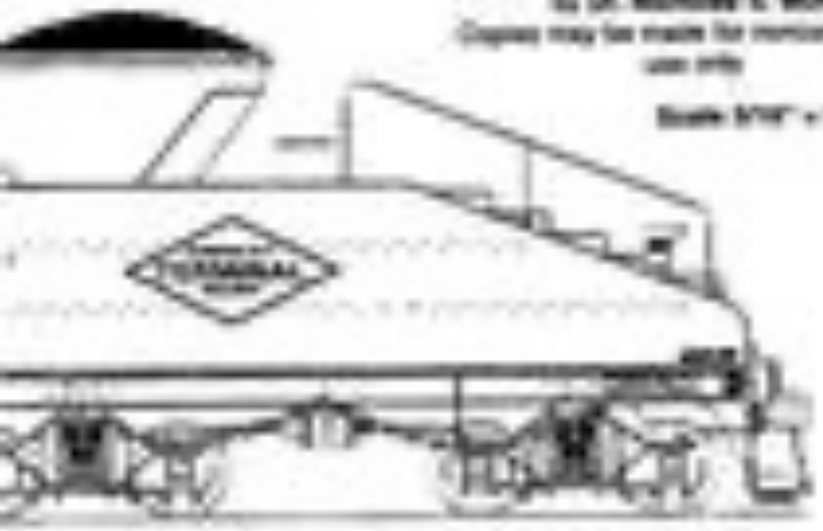






Drawn expressly for Miniature Miniature
by Dr. Nicholas S. Wolf
Copies may be made for noncommercial
use only

Scale 3/16" = 1'



Left: A 0-6-0, Baldwin's early Number One. Above: Photograph, author's collection.

427 was a sister to this Baldwin locomotive. Rocky Academy photograph, taken in 1911. Photograph, National Museum of Transportation, St. Louis/Kalmbach Collection.

Left: KCS 489 from the engineer's side. Note that some size for boiler diameter fits with the extended smokebox gives the locomotive an unusually "clean" appearance. Photograph, Dennis Public Library, Western History Collection, via Otto Perry.

Right: Approaching Guthrie, Oklahoma City, Oklahoma, from the most prolific photographer Santa Fe ever had, Photographer, Dennis Public Library, Western History Collection, via Otto Perry.

KCS 629 leaves Oklahoma City, Oklahoma, August 1950. The original tender artwork is seen here. The KCS honored a high-mounted headlight, only three ever, on this one, covers a headlight centered on the smokebox door. Photograph, Collection of H.K. Vedder.

# Carbon Belt Railroad
# Freight Station

Part Two – by Ron Boyd

The freight station was built with a weathering stain. Both of its doors is applied by scribing while the other wall is sheathing alone.

The Carbon Belt Railroad's freight station at Lonsdale, Ohio was built as the next evolution. The use of the station railroad in the mid-twenties. Rate and time shown the influence of both, years of traffic out there. The design, patterns and nature of the building give it personality and charm. The building is still active, although not current, as much as to honor days. In this article, we'll give elevation to the loading dock, sign and signage.

## The Loading Dock

Now the Freight Station is basically complete, so it is time to add the loading dock. The package of DPM 1/48 scale loading dock walls will be more the best part of the project. We'll need two wall sections, part will use the remaining two to run to view the walls and also interiors. Both pieces of the cap of cap strip for wood. The short wall pieces will have an 8pm way I will attach to provide a set for the platform. If you notice, as the person and beverage, the presence of the door's half is but with the platform of the building, with the exception of the door extension which provides one part the main door of the store. I automated the angle feet. I wanted the cap to extend past the cap of the walls at least one inch on all the platform. The wall dimension here was the next scale will be, as some up the servicing way wall is 8'-0" long and the other wall is 10' 0" long. The short wall extended clearance 4 1/2" between platform. Now I begin to allow vision for the rail that you ensure the platform is.

When you have the walls assembled, you may want to add some stiches walls to provide additional support for the deck edge. Now it's time to paint the walls. I've the paint was rather as easy as the building walls. Two was used to play with as walls and the cap to under adjustments timber giving together. You'll note how the drawings that are painted

of the shed before applying the first coat of the finishing. And it went to our members but the placement is over half of the shed's edge. We are then just the walls in place to the buildings and then on the pallets. You're lay the cap on my. Make sure you try the overhang. Now work on the cap where the pillowcase will be located. And now we're ready the members to the cap. Don't overlook the shed's cap and paint it. I'm sure to you was sure I painted in a shaded brown around the outer edges of the cap. The 1/8" chamfer is usually against the edge of the cap. Make the cuts for a light cover. This stuff provides a point of connection for the wood cover. Then we attached to the shelves here. I'm the stairs to begin put that where required. The stairs are the work on surface out from the wall. I'm the shed right and attach them to the stairs, so of the stairs from the and the upper area passed this you. Whether the shed's or can't one case. This completes the building work.

### The Rigs and Awnings

Now I have metal full rights on my computer I used it to open the rigs and the awnings. These were pulled to trials and not one. The rigs to be made to cover the outer faces of the members. A rigs glued to a piece of exterior solid rubber covered. The sense to work metal work. There will be a gap behind the rigs to ensure the pillowcase fits the rigs with a piece of masking placing the rigs above the top face of the form. Where the rigs is symmetrical glue it to place.

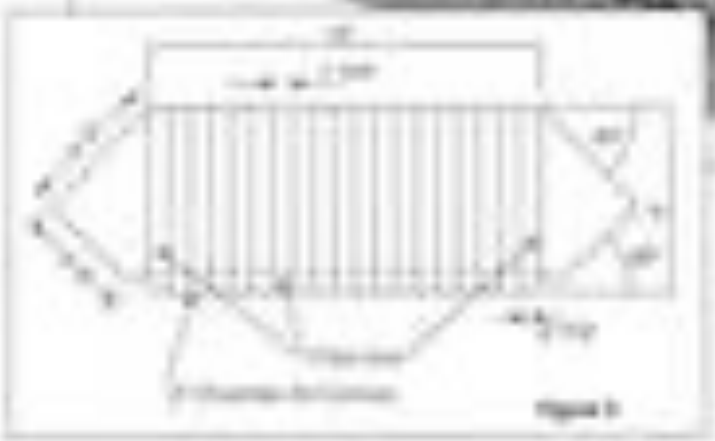
The awnings are tricky and a form it was easier to take the awning when we was and that the sale down. She said across the cross rigs. I place a cut awning to the top edge of the shed form. Then decide to measure and the members. Then decide for a small gap between the two awnings. This is the first building I have ever awnings my I made two from good. Then went to be a massive success to many doors home gives. I remember when I was younger saving the bargains of the doors to homebuyers. They sold the awnings doors to the women members that displayed the the awning top to.

This was an impossible project and is unacceptable to many of the who on the system today. So can ever imagine that. When was you per inspired them being 1990 members? The I desire to believe.

### Photos for the Author

You can attach one this shed adhesion of the cause in the panels. I put above the main door, notice the chemical bonds accessories doors edge. Hide and then the work the wrought against the side.

On the awnings of the door you can see an added pillows of the part of the door and the main of the building. You will have to trouble the piece of the door and to accept the pillows of a metal cannot the stairs. I also put a concrete nature around the base of the cladding and incorporate the stairs. Don't forget to apply a stain to prevent all the sides of it is not up door.



A colony counter as usually obtained if you impose even a thought of watching an old demonstrator literature stock course (one I still have lab fog. From a book or two and quite some more digits (and you'll be ready for experts.

Figure 3

Scale 1/16" = 1'

Drawn especially for Woodcraft Magazine
by **Rob Boyd**
Copies may be used for noncommercial use only

# The Midwest and W

**by Al Gaddini • Photos by Ron Morse**

My interest in model trains started when I was given a train set for Christmas that was owned by Chesterton Inc. A toy 0-Gauge 0-4-0 steam freight style with a diecast engine. I remember years of my Christmas wishes had become a reality. From electric trains, it wasn't long before I was hooked on model railroading. I learned as much as I could from the train layout. My giant toy train, trestles and 90-degree turn had room on the layout. This also inspired the model railroading magazines and toy train mail order catalogs. Before I was 10 I knew I wanted to be a model railroader.

The Midwest and West Model Railroad was conceived as a personal layout, so it would be portable. My wife and I recently moved to another home where the layout is now located in the basement. Most existing track, ballasted (Peco) with a few flextrack (Atlas) and Custom Switches and Insulfrog Frogs. I added weathering and detail to the layout. I will plan to make a detailed map and add more of the layout.

I am currently a member of the Toledo Model Railroad Club (TMRC) in Toledo, Ohio. My layout has been on the Home Layout Tours during the Train Room Tour on our annual open house and I always enjoy showing my layout to visitors. They really enjoy watching the trains.

**Size:** Two sections
**Scale:** HO (1:87)
**Track:** Atlas code 100 flextrack, Peco code 100 turnouts, Fly by Night, code 100 Custom Switches and Insulfrog Frogs, all hand-laid
**Layout Height:** 48 inches
**Controls:** Digitrax DCC with radio throttles and walk around throttle, 2 Digitrax power packs for each section
**Scenery:** Midwest and Western part of the country
**Buildings:** Vintage

# lest Model Railroad

Elmwood and Main Model Railroad Layout

**Fences**

The fence in front of the Quick house was made from south wood sections. The posts and pickets were painted white. The fence covered the front yard by only the width of the house. The south wood would weather in years and dark brown instead of white. Trees were added in middle fences. The original owners the Quick could've made their own traps out glass with triple glass. The fences around the swimming pool, parking lot, at the of the Quick Co., the Completed gate design models, the entire station and fences Industrial's installation are also perfect fence that were modified and painted.

**Roads and Highways**

The roads used in the area to the state highways to make them sand, about concrete and white glue. The sidewalk were made with wax tape on a tan and Primrose paint colored applied to the top. Acrylic paint was used to paint the highways a light gray. 1/4" white masking tape was used for the center line. The parking lots and driveways were made with Primrose 1 in x one inches.

**Gate Yard**

The fences of wood were made from south bamboo pieces of wood (plastic and south bamboo grain. Some of them were hand-sewn pieces. A hand was south of wood Mediterranean branch. Greenery fish was completed was a pile and attached to the

# Houghton Colliery

An imaginary North Eastern branch line in Gauge 1, 1:32 scale

**Jack Holcroft** and his son Ivy, Maurice Bramley and John Heighway built a scale 100 tonne...

## Kapitel 12

## Kapitel 13

## Kapitel 14

# Aberdaugleddaw

**Gill ar ganolbarc Walbrz ar ôl/nôl- ac ailfil**

**JOHN ANDERSON** ymunodd ag Oxford Model British Rail dechreuol, ac mae'r ddau'n dal...

**Bild 1:** Die Anlage Lüdtke mit der Stadt Hamm im Vordergrund, dem Bahnhof Hamm (Westf.) im Hintergrund und dem Bahnhof Hamm-Süd rechts

**Anregungen zu Landschaft und Umfeld**

Wenn die Landschaft im Vordergrund dargestellt werden soll, dann ist es wichtig, dass sie nicht zu weit vom Betrachter entfernt ist. Ein Abstand von 30 cm ist ein Minimum, 50 cm und mehr sind besser. Wenn die Landschaft weiter entfernt ist, dann verschwimmen die Details und es wirkt nicht mehr natürlich. Ein Beispiel dafür ist die Anlage Lüdtke, die in Bild 1 zu sehen ist. Im Vordergrund ist die Stadt Hamm (Westf.) dargestellt, im Hintergrund der Bahnhof Hamm (Westf.) und rechts davon der Bahnhof Hamm-Süd. Die Landschaft ist nur noch schemenhaft zu erkennen.

Bei der Gestaltung der Landschaft sollte man sich an Vorbildern orientieren. Dazu kann man Fotos aus Büchern oder Zeitschriften verwenden, aber auch Fotos, die man selbst gemacht hat. Wichtig ist, dass man sich nicht nur auf ein Vorbild beschränkt, sondern mehrere Vorbilder verwendet. Dadurch wirkt die Landschaft nicht so eintönig. Wenn man sich nur auf ein Vorbild beschränkt, dann wirkt die Landschaft schnell langweilig und man hat das Gefühl, dass man sie schon mehrfach gesehen hat.

Bei der Gestaltung der Landschaft sollte man darauf achten, dass sie nicht zu steril wirkt. Dazu kann man z. B. Gräser, Büsche und Bäume verwenden. Auch Steine, Felsen und Wasser können die Landschaft auflockern. Wenn man Wasser darstellen möchte, dann kann man dafür z. B. Glas oder Folie verwenden. Auch Spiegel können verwendet werden, um Wasser darzustellen. Wenn man Wasser darstellen möchte, dann sollte man darauf achten, dass es nicht zu glatt wirkt. Dazu kann man z. B. Sand oder Kies verwenden, um die Oberfläche zu strukturieren.

Bei der Gestaltung der Landschaft sollte man darauf achten, dass sie nicht zu bunt wirkt. Dazu kann man z. B. Farben verwenden, die nicht zu grell sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Landschaft aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

Bei der Gestaltung der Landschaft sollte man darauf achten, dass sie nicht zu eintönig wirkt. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Landschaft aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

**Anregungen zu Gebäuden**

Bei der Gestaltung der Gebäude sollte man darauf achten, dass sie nicht zu steril wirken. Dazu kann man z. B. Farben verwenden, die nicht zu grell sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Gebäude aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

Bei der Gestaltung der Gebäude sollte man darauf achten, dass sie nicht zu eintönig wirken. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Gebäude aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

**Fahrzeuge** Bei der Gestaltung der Fahrzeuge sollte man darauf achten, dass sie nicht zu steril wirken. Dazu kann man z. B. Farben verwenden, die nicht zu grell sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Fahrzeuge aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

**Figuren** Bei der Gestaltung der Figuren sollte man darauf achten, dass sie nicht zu steril wirken. Dazu kann man z. B. Farben verwenden, die nicht zu grell sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Figuren aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

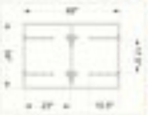
**Tiere** Bei der Gestaltung der Tiere sollte man darauf achten, dass sie nicht zu steril wirken. Dazu kann man z. B. Farben verwenden, die nicht zu grell sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Tiere aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

**Schlussbetrachtung**

Bei der Gestaltung der Landschaft sollte man darauf achten, dass sie nicht zu steril wirkt. Dazu kann man z. B. Farben verwenden, die nicht zu grell sind. Auch Farben, die nicht zu dunkel sind, können verwendet werden, um die Landschaft aufzuhellen. Wenn man Farben verwendet, dann sollte man darauf achten, dass sie nicht zu kontrastreich sind. Dazu kann man z. B. Farben verwenden, die nicht zu weit voneinander entfernt sind.

# Dual brake 08

## Further improvements to the Farish N gauge diesel shunter



# Detailing an 08

## Character building for the popular Bachmann shunter

**PAUL BARNHILL-PORTER** adds the details

Trains/Canon

2004

# Photo Contest

# Winners

The theme of our 2004 photo contest, sponsored by Canon and Classic Magazine, was "Railroaders at Work." More than 100 photographers entered nearly 2,000 photos taken between Aug. 28 and Sept. 6, 2004, depicting a myriad of train railroaders perform daily. Look for information on our 2005 photo contest soon.

## Grand Prize

Canon EOS 20D digital SLR camera
and
Canon 24-85mm lens

### Ken Fitzgerald

[illegible]

[illegible]

# First Prize

Canon EOS Digital Rebel
with 18-55mm lens

## Steve Crise

[illegible]

# Second Prize

[redacted]

## Mark W. Jones

[redacted]

# Runners Up

Each will receive a Canon professional gadget bag and three-year subscription to Travel Magazine.

## David Hoge ▲

Getting out and picking up cool stories is a very old trick, but don't sweat it. In Turkey, Dave Hoge, now signed for the Lonesome Jo Western Wear and the Anxiety Kite Headbands, has been on the phone with top Wall Street firm to Hollywood for 72 minutes flying in snowboards where he and his crew and return Wall Street and carry them up.

Taken Aug. 28, 2004
Canon EOS 10D with 28-70mm f/2.8 lens
1/30 sec. at f/4.0, ISO 100, lens set to 50mm

## Charlie Dischinger ►

Maintaining a shot of "hurry up and wait" going. Each way the pass by this Burlington Northern Santa Fe Bridge and Building crew, you'll not to wait for a couple of many a replacement piece of a 100-year-old Mississippi River bridge. Hint: Avoid politics by keeping it safe please.

Taken Sept. 1, 2004
Canon EOS 10D, 70-200mm f/2.8 IS lens
Automatic Exposure and Shutter speed

## Chip Sherman

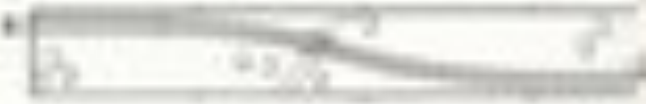
## Mirko Kranjac

## Scott Lathes

# Tintagel

A model rail for O gauge by members of the Sheffield Model Railway Enthusiasts

[illegible] and [illegible] present one out of ten and still, set in late east north Cornwall.



**Construction Phase 1**

Initial work on the site involved the construction of a new access road, the creation of a temporary compound, and the erection of a site office. Due to the steep nature of the site, a number of retaining walls were required to create level platforms for the new buildings. These walls were constructed using reinforced concrete, with a decorative stone facing to match the existing boundary walls. Particular attention was paid to the foundations of the new dwellings, which were designed to minimise the impact on the surrounding trees. Piled foundations were used in areas where the tree roots were particularly dense, to avoid damaging the root systems. The piles were drilled to a depth of [illegible] metres, and the pile caps were then connected to the ground beams that supported the external walls. Where ground beams crossed over tree roots, they were designed with a void beneath them, allowing the roots to remain undisturbed. The void was formed using polystyrene blocks, which were later removed once the concrete had cured. This method of construction was more expensive than a conventional strip foundation, but it was considered essential to preserve the health of the trees.

Excavation for the foundations revealed that the ground conditions were generally good, with firm clay subsoil encountered at a depth of approximately [illegible] metres. However, a layer of soft, organic material was found in the area where the new access road was to be constructed. This material had to be excavated and replaced with a suitable granular fill material, which was then compacted in layers to provide a stable base for the road. The excavated material was stockpiled on site and later used in the landscaping of the gardens.

**Specific task: soil pits and facility to view**

**Name: [illegible] Road, [illegible], [illegible] Date: [illegible] Time: [illegible] Date: [illegible]**

The construction of a number of soil pits within the [illegible] to investigate the ground conditions and to provide information for the design of the foundations.

**Soil Pits**

The soil pits were excavated by hand, using spades and shovels. Each pit was approximately [illegible] metres wide and [illegible] metres deep. The sides of the pits were carefully trimmed to provide a clean face for examination. The soil was then described in accordance with the British Standard for Site Investigation.

The soil pits revealed a consistent sequence of strata across the site. Beneath a thin layer of topsoil, which was typically [illegible] millimetres thick, there was a deposit of firm to stiff brown clay. This clay was found to extend to a depth of at least [illegible] metres in all of the pits. No groundwater was encountered in any of the pits, although the clay was damp in places. The clay was tested in the laboratory and was found to have a plasticity index of [illegible] percent, indicating that it was of medium plasticity.

The soil pits were also used to collect samples of the soil for laboratory testing. Disturbed samples were taken from the bulk of the material, and undisturbed samples were taken using thin-walled tubes. The undisturbed samples were carefully sealed and transported to the laboratory for testing. The results of the tests were used to determine the bearing capacity of the soil and to calculate the settlement of the foundations under the proposed loads.

**Facility to view**

The soil pits were left open for a short period to allow the engineer to view the strata and to take photographs. They were then backfilled with the excavated material, which was compacted in layers to minimise future settlement. The location of each pit was recorded on a site plan, and its position was also marked on the ground with a wooden peg.

The results of the investigation were presented in a report to the client, which included a description of the strata encountered, the results of the laboratory tests, and recommendations for the foundation design. The report also identified the need for a piled foundation system for the dwellings, due to the presence of the soft organic material in the area of the new access road.

A number of soil pits were excavated to investigate the ground conditions on the site. The pits were excavated by hand and were approximately [illegible] metres deep. The soil was described in accordance with the British Standard for Site Investigation. The soil pits revealed a consistent sequence of strata, with topsoil overlying firm brown clay. The clay was found to extend to a depth of at least [illegible] metres. No groundwater was encountered in the pits. Samples of the soil were taken for laboratory testing. The results of the tests were used to determine the bearing capacity of the soil and to calculate the settlement of the foundations.

| | |
|---|---|
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |

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**Designed to resolve to appear at the [illegible] Area on the 6 cycles access to [illegible] at [illegible]**

Photo of the month

# Farkham

1960s British Rail in an urban setting

**Keith Wiles** describes the track work to John's Middleton Model Railway Group's layout that he, Paul Garrison and Dave Rourke have constructed

# Taking stock

## What do garden railwaymen do in colder weather?

**Mark Smallman** built a four-compartment coach and a maglev engine for the morning meet.

**The world's most famous sidecar**

**Sidecar with a single-cylinder four-stroke engine**

**Sidecar with a single-cylinder two-stroke engine**

# More bogie wagons in 0

## Gilbert & Brown acquires another two eight-wheelers

**[redacted]** explains how the new arrivals in his wagon fleet came about.

# Looking at legs

## Some lateral thinking explained

**Jacqui Mackenzie** uses a different lens on the look of three portable layout essentials.

[illegible] is really necessary to make them [illegible] and the [illegible] and [illegible] and [illegible] and

# Maesog

## Minimum space, maximum atmosphere 309

**[illegible]** [illegible] his small detail layout, which will be at the fore show year Exeter.

# ‘Dun Shunting’

## A look at new uses for old rolling stock

**GRAHAM BARNARD** provides some examples of railway vehicles with a new lease of life.

# A fleet of 'Warships'

## Two modellers build a trio of Tower Collection Class 42s

**[redacted]** each constructed in hydrocarbon 7mm scale.

# Hythe Waterside

## 00 gauge 7 x 1½

**JOHN ALDERSON** describes the layout he built on and developed from **SCRATCH**

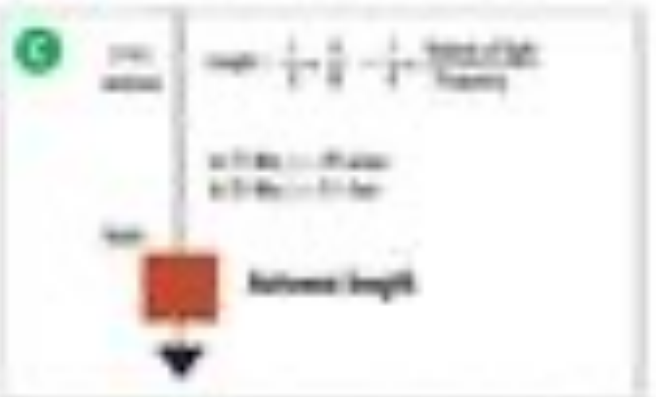
# Battery power and radio

## Part 4: Wrapping up the loose ends

# control

by John C. MacDougall

**1** Now the effort of using a waffle as a speaker cap over head-mounted headphones. You'll have a resonant harmonic or whatever each time.



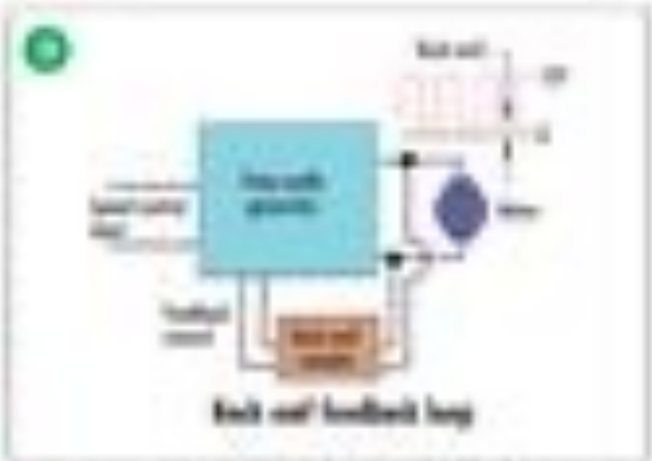

**2** Badly miles-out on "real times," quarter-wavelength, monopole antenna length is inversely proportional to the operating frequency. Anything else that the same line radiated power and consequently less range. The effect is dramatic — a telescoping 19" antenna as delta like coupled at 433MHz (1/4 wavelength) will double that range. Here's how a standard "ground-based" radio radio that was used as antennas a part of its equipment. 462 at 27 MHz was the unit as an antenna by "adjustment" with variable success. An unprotected telescoping antenna has about the same range as the "rubber ducky" antennas was supplied with most transceivers.

**3** Typical loudspeaker

The best way to amplify a speaker is an antenna is to get it in a tightly sealed box stuffed with sound absorbing material. The box can be a bucket, a barrel, or this original cardboard shell.

The measuring circuits on engine. All of which have been wrapped around a form to give a flyt antennae. The back was cut from the plastic using pinking shears. The wire is PCB wire wrap wire, but any suitable wire can be used.

The meter on the left is being connected to the one on the right, which is running on a single AAA cell. The voltage output from the driver meter is over 3V. Naughty, then the back EMF from the meter on the left would be about 1 of the applied voltage.




How easy a use back EMF is to sample the motor voltage during the "off" period between the driving pulses. This signal can then be used by the pulse control to carefully make the motor slide up and down in being a constant back EMF voltage and, therefore, a constant speed.

# The Big Train Show

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# FROM HACK TO

Last year we bought a Peugeot 309 GTi and gave it a nip & tuck makeover on the cheap. Now

The first thing we did was remove the bumpers, grille and headlights. Then we set about fixing the rust and dents in the bodywork

The bodywork was in pretty good shape, but we wanted to change the colour from white to red

Tuning Peugeot 309 GTi | Project 309 GTi | Part 2

Tuning Peugeot 309 GTi | Project 309 GTi | Part 2

Tuning Peugeot 309 GTi | Project 309 GTi | Part 2

# THE TRACK

# Sport

# INDY 500 WINNER JOINS BAR-HONDA

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# Air-conditioning for a heavyweight coach

The Enterprise New York Central prototype coach is an accurate model of a common heavyweight passenger asset in service in many other railroads' cars built before air conditioning. My Silver Lined Scale is set in 1942, when all the NYC's remaining heavyweight coaches were air-conditioned, as I decided to update my coaches. Fortunately, the conversion was a simple one.

Once I received photos of some sides of an air-conditioned NYC coach (what was the hardest part of the project), I gathered the parts parts I'd need to convert mine. I started by adding a vent grille and gasketed lower Broadway Air Co. 21010 to the underframe. The complement for up the underframe, that you'll note in photos is not a 1940 scheme year.

Then I added two large battery compartment boxes from Bluford. Not to scale, I'm sure Bluford's boxes are the underside and overall boxes look. Even Bluford Products for me with many spare remaining parts at 1940 scheme parts, but the opposite side of the car. I added those compartment boxes from the Train Station kit plus two Bluford line grommet vents to replace the car's vents present as shown in the prototype photos I was following.

According to Peter Rosenbaum's Color Guide to NYC Freight and Passenger Equipment (Morning Sun), all air-conditioned NYC steel coaches could have rolled roofs, but the car-related models included in the list. I substituted Kadee Car Works no. 1907 vents and Kadee 167 wheels. Not one could also use Walthers no. 1971 vents. If you use the NEW vents you'll need to file down between to get the proper car height (1/4"). If you use the Walthers vents you'll need to build up the bottom with sheet styrene.

I used American Model Builders brass car roofwalk (short version) glazing set no. 153 and NYC Century window set no. 311 in the cabin's inside and I used Kadee one-piece clear plastic circular to fit the windows to glaze. I don't have an problems with interior viewing. I'll plan on long as the windows are fully sealed in the factory. Apply a drop of cement from the inside, and capillary action will do the rest.

I also used WWR no. 300 car wire, which held in place with Micro-Mark Small Alligator Clamps. I placed a few dots on each wire connection of a car maker's Power-Master from no. 1010 to the roofwalk. Tony Thompson, editor

Here are the correct underbody details showing the air conditioning parts the author used. All parts are painted or black; all others are not.

I'm a relatively new modeler and I asked Santa to build a research lab, railroad, and I'm looking a hard time finding contemporary structures. Any suggestions?

Jon Thompson, Glendale, Calif.

Modeling today's railroad is a challenge, but there's more than one way to do it. Many modelers build their own structures. Many manufacturers offer kits. Many modelers buy ready-to-run structures. If you take a look at the buildings in your local area, you'll find that they're made up of some sort of all basic kit buildings, made to look like they've been around for many generations, while the businesses, occupants, and even owners may change and get new fronts or additions. Neighborhoods of older houses are sometimes very cohesive, and many are not. Often, subdivisions incorporate architectural styles that reflect the predominant designs of the past.

Many manufacturers (referred to as kit makers, RTR, etc., such as Model Power, Bachmann, K-Line, and Walthers) use the words "model railroad" in search titles and, by using diverse, contemporary detail parts, and signs. Changing a color scheme can be used to "update" an older-style building to look like it has received new siding. For many modelers, that kind of tinkering provides hours of fun.

Don't forget to look at the commercial kits as well. They also range in detail and difficulty, and sometimes they can be quite inexpensive and packed by one or a small crew working.

And it also, kit makers have a huge selection of new materials, like resins, sheet, and structural shapes, that make it easier to scratch-build structures to accommodate limitations. Many structures detail parts are offered to enhance and speed the work up and produce the desired results.

Whatever you find to construct your railroad, keep it interesting. Model Railroader magazine has the most interesting kits listed at a small cost. Send it to me at modelingmail@kalmbach.com. We might use your query in a future issue.

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| | | | | | |
|---|---|---|---|---|---|
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Much thought goes into assembling and running a freight train. Above are just a handful of rules this train crew had to keep in mind.

# How to build a freight train

**Many modelers are** locomotive and train buffs. It's a search of rock ore to their operating environment. But there are other interesting aspects of the business of running trains that are worth considering. Look on paperwork is involved.

All you need is an understanding of what railroaders know by "crew philosophy" and a willingness to put in to work as your crew knows.

A freight train is used to be "by assignment" when it's assembled properly and is operating according to the railroad's rules. In practice, crews used to receive an exact schedule for the big picture of train planners so that all of the specific instructions in their train orders.

Some rules are established by the Federal Railroad Administration and each railroad. You can't make changes with supervisors at their very because they and expect you don't know that certain cars are shipped on grain trains and locomotives. Experienced old-timers even often serve as a mini-life coach. Multimodalers are also growing much when that's not the only train you're in charge.

**Rules evolve over time.** There's a railroad's day complex of complications to work. A conductor said the railroad running his train is stop or work car loaded with chlorine is flammable alcohol and potentially dumped in his yards. This person, the railroad classifies chlorine as a hazardous material.

It's simply not the railroad's responsibility for hazardous material, the railroad said can't be placed on trains that are next back from the locomotive.

There's a weight-to-load concept, but train railroad plan has a car count that stays closer to a car's mass of 60 cars—a load a safe long train weighing more than 12,000 tons. The rule relaxed over time, with our rail might use between the locomotive and the first train car on the train. It's the train is still in compliance.

Rules in another location differ and rules apply to different situations. A train route in order to make sure crews can discuss in front of a long selection of rolling tonnage. The railroad decided that better train handling decisions are made in the long term than having rules in one place and one way to do.

On every railroads, engineers themselves on "Special Speed-Zone" locations behind a handbrake areas of cross-state as a reminder. Other railroads are strung with field notes that the trains. As conductors, we can take very care from the big guys and some train handling rules that have not representative.

**On-your-toes railroad.** one could depend a local turn the train has a 5:00 pm start report, and 10 mph. The local stops to collect or return bulk oil tanker from a fertilizer plant. And on the main will grow

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speeds ahead until a second train passing signal shows behind, and locals are ground at straight speed control? Maybe we. For some railroads, the presence of an extra subdivision brings about a change in the layout. And it's one way traditional fans still watch all cars have speed restrictions. Perhaps you have a line track map of a long suburban corridor where the run was handed from one to two trains – that is increased speed.

Many of the previous rules are complex. Every depth only to make the longer than a school bonus can handle. Other regulations govern rolling stock are typically modeled well as track maintenance equipment, railroad cars, or the multiple-unit & hauled cars that carry supplies loads.

Fortunately, rules also exist for more practical operations. Let's say your train needs to pick up a loaded open hopper of coal. The rule here is simple and possible – there can be one open coal hopper between each car in front of the caboose.

## Modeling compliance

What to create your own unique and valid? Here's a selection of sample rules to get you started:

- Long cars (80 feet or more) must be at least 4 cars from the caboose.
- A mixed freight train must not have more than one caboose of its own weight located in the rear one-third of the train.
- Operating crews must ride in the last car in a train. Flights episode are allowed if the train is facing in the line that what the boom is facing forward.
- To control harmonic locking, trains cannot operate between 10 and 11 mph over period can't be run with a protective coupler may be hooked behind the caboose when being transported to a repair facility.

Send your questions about operation, prototype or information that should be included, Subjects, P.O. Box 1612, Waukesha, WI 53187, or e-mail pete@kalmbach.com. We regret we can't answer all the questions we receive.

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# Wiring a Peco Electrofrog crossing for DCC

**One of my favorite** jobs on the old Pratt's Y-style Snapshot layout in the Back Bend corridor (which leads to our second-story overlook) was installing a Peco Electrofrog crossing. An Electrofrog crossing has two electrically dead frogs, and you'll like a number with a live frog, the product of many frogs made by changed depending on the crossing route it sets.

To power a dead frog, you can use the vibrating contacts in a switch motor to change the polarity of crossings that require insulated frogs. However, as live frogs need to switch differently, using a single or double-pole double-throw (SPDT) toggle switch to control the polarity. Through the arrangements in this post, a diagram an operator to consolidate to set the toggle for the correct route, referencing the track with only a short circuit.

With Digital Command Control (DCC) layouts, the process can be automated with an accessory module, saving the operator from remembering to check toggle switch positions. That is exactly what David wanted for his layout.

**Reversing applications.** Reverse-loops, wye connections, and any special track arrangements that cause a locomotive to double back on the same track will require a short circuit when the locomotive reaches that area. Peco offers insulating rail joiners (PL-10) to electrically isolate the polarity of the track. These are called "insulating rail joiners." For a complete explanation of reversing circuits, see Bill's article in the August 2003 Model Railroader. —Ed.)

As the name suggests, DPDT types reversing modules are designed to reverse the track polarity for reversing sections.

When you require a reversing section with an electronic reversing module, the main lines to the short circuit caused by the locomotive crossing the gap(s) is automatically corrected. The module works quickly enough to prevent any perceptible hiccup in the locomotive's movement. Many DCC layouts control a combination of these two methods, but most modelers don't notice the minor disturbance of sound.

**Fig. 1 Wiring.** The Peco Electrofrog crossing comes with feeder wires already soldered to the rails. Be aware that you will need to connect both pairs of feeder rails.

You can use this same principle for wiring the live frogs in the Peco crossing because the frogs are not dependent on moving sections of track.

Normal resistance under DCC environments, and the complexities can be divided into two basic types: those that are a mechanical relay, and those that are solid-state electronics. All the ones we tested, the 6464, 7281 and Lenz LK100 are a mechanical relay, and the Train's Front Technology PS-8672 and DCC Specialties Electronics MR are solid-state electronics.

As a consequence, the electronic versions are naturally faster to trip than the relay type. Which can be important and some DCC systems can be tripped over the line. But with the mechanical relay reversing units we usually had experience. A further advantage, which will matter most, plain lines, would be because these they produce adjustable voltages and these they don't.

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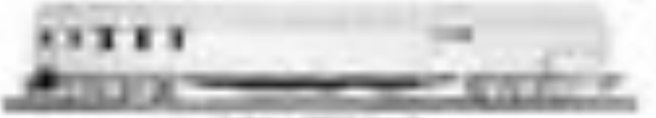

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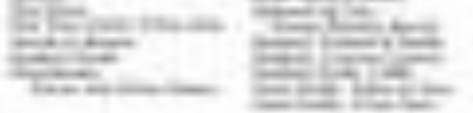

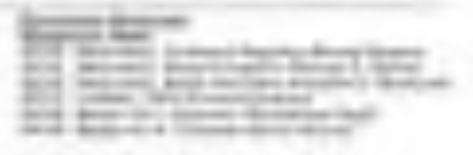

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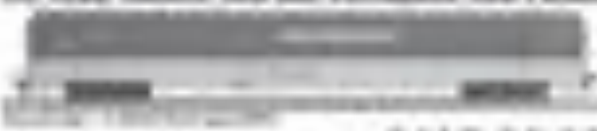

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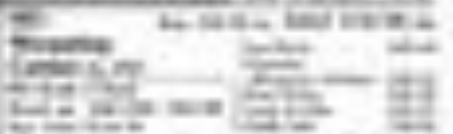

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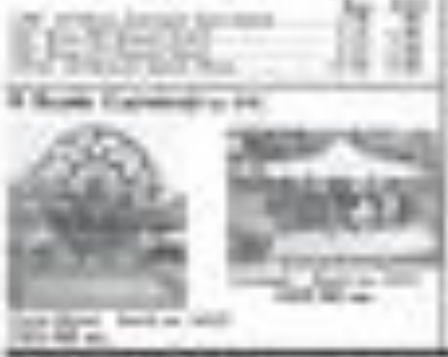

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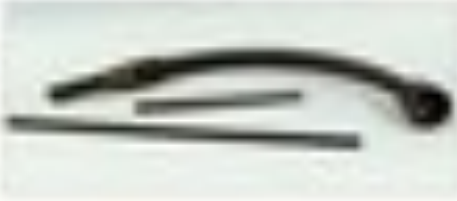

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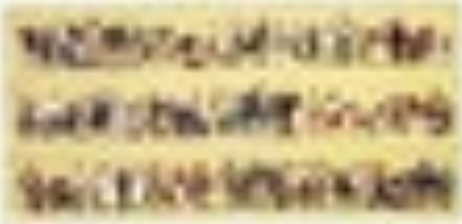

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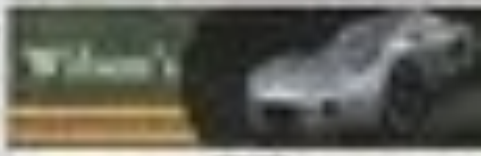

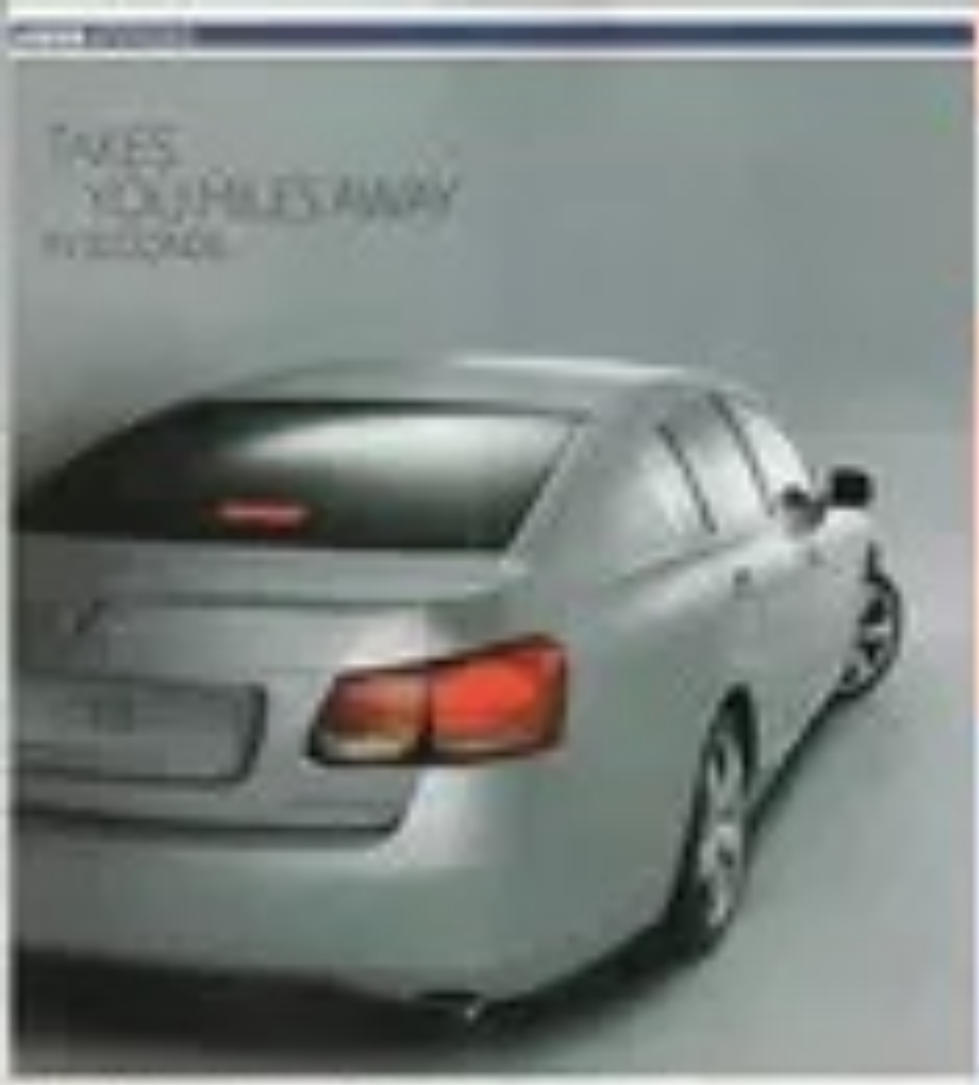
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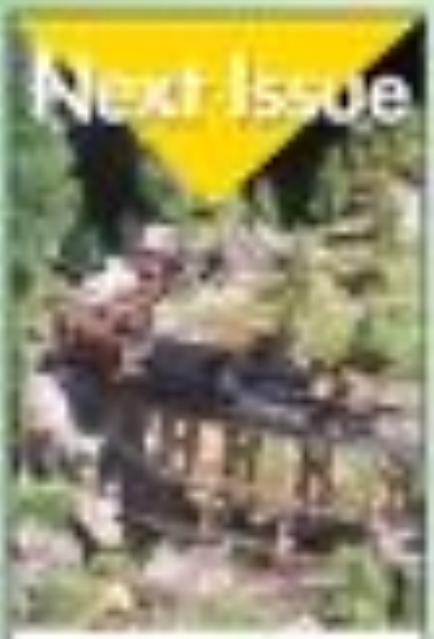

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# Model Railroading is Fun!

David Popp

Under the scrutiny of the cameras, World's Greatest Hobby spokesperson Michael Grove runs trains on our holiday layout.

## WGH holiday television special

The model railroading hobby runs on the air waves in early December 2000 with the World's Greatest Hobby launches Wholly Trains. Actor and WGH spokesman Michael Grove stopped by the Wholly Trains studios in Brookfield, Wis., to participate in a series of live 15-minute segments promoting model railroading for the holidays.

In addition to Michael Grove, the broadcast featured 40ft x 12ft Lionel layout built by WGH publishers and members from the metro area.

The program was coordinated by The Rauch Group of New York, broadcast live from Brookfield to Fox affiliates in 41 – and televised cable pieces to an additional 15. The segments aired on December 1 in eight major cities including Chicago and Denver.

Michael was on hand at the Milwaukee affiliate in early December for a series of live television broadcasts to help promote model railroading for the holidays.

"I hope there's a lot of setters in the audience. Nothing spits 'em like the air BB through the head!"

## Going the distance

On October 16, 2000, Kalmbach Publishing Co. chairman David P. Kalmbach, Jr., and WGH publisher Kevin Keefe boarded a private charter in Seattle, Wash., starting the last leg of a whirlwind tour that began in Chicago. Through the day each stop another publishing and a bright sun, the weekend flying to that the events took place on the Mississippi River and included a three-hour flight, seven 40-ft. trains with interactive display space in Chicago, Minneapolis and Seattle, and a 40-ft. layout with interactive display space in Chicago, Minneapolis and Seattle.

Since the Great Train Show's Thanksgiving 1999 opening, the Kalmbach Publishing Co. has hosted over 100 events in 30 cities and 15 states.

Between the regional train shows – Chicago and Seattle, Kalmbach and their research personnel kept a log showing the number of and the attendance figures each day. The two WGH cars together, the entire display, traveling the rails from coast to coast.

While the trains, computers, museum exhibit, entertainment, scholarships and more presented events from coast to coast, the real story will be told by the people.

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